ABSTRACT OF A

Lecture

ON

FURTHER INVESTIGATIONS ON THE DESTRUCTION OF MICRO-ORGANISMS BY AMŒBOID CELLS.

Delivered in the Theatre of the Laboratories, Victoria Embankment,

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SIR ANDREW CLARK, MR. BRYANT, AND GENTLEMEN,—More than one year ago I published a paper in which I maintained that the inflammatory process consecutive to the introduction of the bacilli of quarter-evil under the guinea-pig's skin is a protective process serving a useful purpose, and that the destruction of micro-organisms at the point of inoculation is carried out entirely by the amœboid cells present in the inflammatory exudation. These conclusions were, on the whole, confirmatory of the theory of inflammation, as it has been built up by my honoured friend and teacher, Elie Metchnikoff, and the further researches, an account of which I am about to give now, have confirmed me in my former opinion that the destruction of micro-organisms in living tissues is accomplished by the cells of the body, and by the cells only. My experiments were all made with the virus of quarter-evil, the *bacillus Chauvæi;* but instead of using guinea-pigs, which take the disease readily, I inoculated rabbits, which are immune against quarter-evil, and therefore lend themselves well to the study of the effects on this virus of the living fluids and cells. If the immunity of rabbits be due to the fluids of the body not furnishing sufficient nutritive material, the bacilli of quarter-evil ought not to grow at all in these animals, or sparingly at most. If the immunity be due to some bactericidal power possessed by the rabbit's fluids, then degenerated bacilli should be found in the fluids near the point of inoculation. But if, on the other hand, the rabbit's resistance be due to the action of the animal's cells, and not to the action of fluids, then the bacilli should grow freely in the fluids of the animal's body, but degenerate in the interior of amœboid cells.

The first experiments which I made rather inclined me to believe that the *bacillus Chauvæi* did not thrive in the living fluids of rabbits. On placing a little of the weak virus (0·005 mg.) under a rabbit's skin, with antiseptic precautions, and examining the point of inoculation twenty-four hours afterwards, no bacilli were to be found in cover-glass preparations made with the fluid at the point of inoculation. On carefully staining sections of the point of inoculation, however, excised twenty-four hours after the operation, I always found a few leucocytes which surrounded the débris of the powder, and a few typical bacilli enclosed in amœboid cells. If, instead of using such a minute quantity of the powder, I inoculated more (0·05 mg.), extremely numerous bacilli were seen at the point of inoculation, and by giving a somewhat larger dose the animals died of typical quarter-evil in forty-eight hours or three days. At the point of inoculation of such animals the bacilli were present in large numbers, many of them being contained in leucocytes and showing marked signs of degeneration. These degenerative changes exactly resembled those produced on the same bacilli by the leucocytes of guinea-pigs. These experiments prove that the immunity of rabbits against the *bacillus Chauvæi* is not absolute, but only relative, and that this relative immunity is not due to want of nourishing material, for when the dose of virus introduced is large enough, the bacilli thrive exceedingly well.

My next task was to see whether the fluids of animals comparatively immune against the *bacillus Chauvæi* possessed any bactericidal action on the same micro-organisms. Dr. Roger has made the remarkable observation that the serum of guinea-pigs, which are *non-immune* against this micro-organism, possesses very strong bactericidal powers on the same bacillus, whereas the serum of rabbits, which are relatively immune, has no harmful action on the *bacillus Chauvæi*. This and other observations prove the truth of what I stated last year—namely, that the bactericidal powers of the *dead* fluids of a given kind of animal against a specific micro organism is no criterion of the power of resistance of that animal against this micro-organism. Just as *living* blood differs in its optical, chemical, physiological, and other characteristics from *dead* blood, so does the action on micro-organisms of the *living* fluids of the body differ *in toto* from the action of *dead* fluids on the same micro-organisms. In the case of quarter-evil the *dead* fluids of guinea-pigs (Roger) possess strong bactericidal action on the *bacillus Chauvæi*, while the living fluid of the same animal (Armand Ruffer) possess no bactericidal power over the same micro-organism.

In order to study the processes occurring in the living body, I made use of a method which had previously been employed for anthrax by Metchnikoff and others. I placed the powder to be examined in a small bag made of filter paper. The bag was made exactly like those in which pharmaceutical chemists send out powders, but the lower surface, where the ends met, was sealed with paraffin. Some of the first vaccine, 0·05 centigrammme, was placed in the bag, and the whole inserted under the skin of a large rabbit and left *in situ* for a period varying from twenty-four to forty-eight hours. The bag was then taken out and its contents examined, whilst the paper forming its walls was at once plunged into absolute alcohol and carefully hardened in that fluid. In the very centre of the powder the numerous bacilli looked for the most part normal, though I must confess that some were irregular in shape, and did not appear to have grown quite as well as others. These bacilli were simple micro-organisms, the growth of which had been retarded; for forty-eight hours after the inoculation, these irregular forms occurred but seldom, or were totally absent. Moreover, the innermost part of the paper in contact with the powder was full of short, straight, thick, and absolutely normal bacilli. Here and there a leucocyte was met with in the interior of the bag; and this fact proves that none of the chemical substances present in the liquid exudation had been retained by the paper, for if a solid particle like a leucocyte could force its way through the paper, chemical substances could not possibly be arrested. The *bacillus Chauvæi* therefore grows perfectly in immune rabbits, and further proofs can be adduced by carefully cutting sections of the paper bag containing the virus after it has remained under a rabbit's skin for some time.[1]

Microscopic examination of such sections shows that the bacilli are extremely active, as they force their way for some distance into the very fibres of the paper. On the other hand, the leucocytes attracted to the spot by the poison secreted by the micro-organisms migrate in enormous numbers through the paper fibres, until eventually bacilli and leucocytes meet, and then the struggle can be seen in all its intensity, for most of the leucocytes are absolutely crammed with degenerated bacilli. Notice, however, that in the deeper parts of the paper not a single bacillus is to be seen. They have all been arrested by the amœboid cells.

I inoculated a rabbit with 0·005 of stronger vaccine, enveloped in a paper bag and on the sixth day the animal still appeared in perfect health. The paper bag, together with the surrounding tissues, were then removed, and hardened in absolute alcohol. No bacilli were to be found, but innumerable lymphoid cells which had migrated into the paper. Besides mono-nucleated cells, true multi-nucleated giant-cells, resembling in all particulars those of tubercle, were also met with. These were formed by the fusion of several epithelioid cells, and, judging from the appearances now to be described, they possessed exactly the same functions as epithelioid cells. Many giant-cells contained peculiar glistening, homogeneous, irregular, yellowish bodies, which proved to be nothing more than partially-digested masses

[1] These sections are extremely difficult to cut. I had the advantage whilst I was doing these experiments of having the help of my friend, Dr. J. H. Walker, of Corwen, who very kindly made and stained these exceedingly beautiful sections for me.

of filter paper which they had absorbed. In some places, indeed, these enormous macrophages had been fixed by the reagent at the exact moment when they were absorbing the paper fibre, and one might then observe a giant-cell almost completely surrounding the foreign body, which was still partly sticking out of the cell. This new fact, together with those described by Metchnikoff, Soudakevitch and myself, absolutely prove that the giant-cell is not a weak and diseased structure (Weigert, Koch), but an extremely active and useful amœboid cell—a fighting cell.

It was important to see whether the virulence of weak virus was in any way lessened when exposed to the action of the living fluids of the rabbit, and the following experiments were performed for this purpose. 0, gr. 15 of second vaccine was divided into three equal parts; 0, gr. 05 of this was inoculated into one rabbit (A). This animal developed a typical tumour due to the growth of the *bacillus Chauvæi*, but this gradually disappeared, and the animal very soon recovered its former health. 0, gr. 05 was wrapped in filter paper in the way already described and placed under the skin of another rabbit (B). Twenty-four hours afterwards this animal was placed under chloroform, and a slit made in the paper so as to allow its contents to escape. This animal died forty-eight hours afterwards of typical quarter-evil. In the same manner 0, gr. 05 of the same virus was introduced under the skin of a third rabbit (C). Forty-four hours after its introduction the bag was artificially ruptured, and twenty-four hours afterwards this animal died of quarter-evil. In order to show that this result was in no way due to the fact that the virus was placed in a part already weakened by the presence of the filter paper, a non-mortal dose was placed in a paper bag under the skin of one rabbit and twenty-four hours afterwards this was removed and the contents introduced subcutaneously into a normal healthy rabbit. The latter animal died in less than two days of quarter-evil.

Further evidence that the disappearance of the virus is due to the action of leucocytes can be obtained if, instead of examining the point of inoculation twenty-four hours after a small dose of virus is introduced, it be examined at the end of three or four hours. It is then seen that many bacilli have indeed developed, but that immediately afterwards they are taken into the interior of the leucocytes which have migrated to the spot. Very few bacilli, therefore, are found floating in the fluid, for most of them are contained in the interior of lymphoid cells, and ultimately are destroyed by the cells which have migrated to the spot.

We shall see presently that it is possible to produce in rabbits, by the inoculation of the *bacillus Chauvæi*, a disease which proves fatal in less than twenty-four hours. It is a noteworthy fact that in such rapidly fatal cases not a single leucocyte is found near the point of inoculation, although abundant exudation of sanguineous fluid takes place, in which the *bacillus Chauvæi* thrives exceedingly well.

Charrin had asserted that if an immune animal be inoculated with a strong virus and recovers, the virus gradually loses its power; so that, after living in the fluids of immune animals, it can no longer reproduce the disease in another animal. The following experiments have led me to absolutely different conclusions:—Rabbit (A) inoculated with 0, gr. 05 of second vaccine, so as to produce a small localised collection of fluid. A small paper bag was then filled with 0, gr. 001 of first vaccine and placed under the skin of the same rabbit, so that it was surrounded by the virus first introduced and was soaked in the exudation liquids of the animal suffering from a mild attack of the disease. Two days afterwards the rabbit (A), the temperature of which had oscillated between 101° and 103°, was killed by the inhalation of chloroform. The whole abscess-wall was scraped and injected under the skin of a guinea-pig (*a*). The paper bag was carefully opened and a trace of its contents placed under the skin of another guinea-pig (*b*). The first of these two became extremely ill, but ultimately recovered, whilst the guinea-pig (*b*) died of acute quarter-evil in less than forty-eight hours. A white rabbit (B) was inoculated in the same manner as rabbit (A), and the same experiment repeated, except that the paper bag was allowed to remain for four days under the rabbit's skin. The guinea-pig inoculated with the abscess-wall died in two days, whilst the animal which had been inoculated with a trace of the contents of the paper bag died about twelve hours before the former animal. In these cases, therefore, the virus living in the fluids of an animal which was gradually recovering from the disease lost none of its power.

I am able to confirm, as far as the poisons secreted by quarter-evil are concerned, the researches of Massart and Bordet, Gabsitchewsky, and Buchner, showing that the chemical poisons secreted by micro-organisms attract the leucocytes to the spot where they are introduced. I took the muscles round the point of inoculation of a rabbit which had died of acute quarter-evil and pressed out the fluid. This fluid was then filtered on a Chamberland's filter, and a small piece of sterilised sponge was allowed to soak in this liquid, free now from micro-organisms, but still containing the chemical substances secreted by the latter. This, together with another small piece of normal sterilised sponge, was placed under the skin of a rabbit and examined after three hours. It was then found that the normal piece of sponge contained but few leucocytes, whilst the piece of sponge previously soaked in exudation fluid was crowded with amœboid cells. Clearly the poisons present in the muscles of the diseased animal have an attractive action on leucocytes.

It can be shown that in some diseases, at least when the disease ends fatally, the leucocytes lose the power of leaving the vessels in order to proceed to the point which is irritated.

Whilst this was being written, I received through the kindness of Messrs. Massart and Bordet a copy of a paper in which these observers show that lactic acid has indeed the power of repelling leucocytes. My mode of procedure, which, without knowing of the Belgian observer's results, had led me to a similar conclusion, was as follows: I took two small pellets of cotton-wool and introduced them both under a guinea-pig's skin; but, whereas one of the pellets was normal sterile cotton-wool, the other one had been soaked for two hours in the British Pharmacopœia solution of lactic acid. The pellets were taken out six hours afterwards and their contents squeezed out on clean slides and examined. The normal cotton-wool was crammed with leucocytes, but the pellet which had been soaked in lactic acid contained none at all. It remained yet to be proved that the action of lactic acid is the same when it is injected together with the virus of quarter-evil. Around the paper bag (A) were numerous leucocytes, many of which contained bacilli. The contents of the bag consisted of leucocytes holding bacilli in their interior and a goodly number of free bacilli. The muscles around the bag appeared almost normal, and there was no noticeable œdema. The state of affairs on the other side, where the virus had been placed after soaking in lactic acid, was very different. The fluid immediately surrounding the bag contained very few leucocytes, most of which were empty, while in the bag itself there were but few leucocytes holding no bacilli in their interior. This experiment proves that owing to the repellent action of the lactic acid, the disease becomes intensified as the leucocytes are unable to act efficiently. Lactic acid, however, is not the only poison which has the power of repelling leucocytes. Carbolic acid, sublimate, iodine, turpentine, croton oil, all have the same effect; but it is an extraordinary fact that whereas strong solutions of these substances repel leucocytes, very weak solutions attract powerfully the same cells.

Another animal had 5 m. of the same fluid injected into the muscles of the right leg, and 5 m. injected into the veins. Fifteen hours afterwards that animal was found dead, cold already, with an enormous tumour of the leg at the point where the virus had been inoculated. Microscopic examination showed that the muscular fibres at the point of inoculation were separated by exudation fluid containing in parts an enormous number of normal bacilli, but not a single leucocyte was to be seen anywhere near the point of inoculation. The heart, kidney, and lungs contained no bacilli, and nowhere could I find any lying free in the blood, but the amœboid cells present in the liver and spleen were often quite full of micro-organisms. It is clear from these experiments that, although the leucocytes were able to wage war against the bacilli present in the vessels—although they were perfectly active,—yet they refused to leave the vessels in order to destroy the bacilli present outside the vessels. Guided by some theoretical reasons, I felt convinced that this failure of the leucocytes to fulfil their functions was due to some vascular changes. My

theories proved to be wrong, however, for I found that, although the leucocytes refused to go and fight the *bacillus Chauvei*, they left the vessels with alacrity provided they had some other object of attraction. Repeating the last experiment and inoculating the bacillus pyocyaneus into the ear at the same time, I found, six hours afterwards, the point of inoculation of the bacillus pyocyaneus crowded with leucocytes, which were extremely active and greedy, whereas not one leucocyte was to be found at the point of inoculation of the *bacillus Chauvei*.

Conclusions.—Having arrived at the end of this long enumeration of facts, I may be allowed to point out shortly what conclusions may in my opinion be deduced from the experiments just described, though of course the conclusions can only hold good for the virus I have used in my observations. In the first part of my paper it was shown that when a small quantity of virus is introduced, an observer might feel inclined to believe at first that the *bacillus Chauvei* does not grow, and that the fluids of immune rabbits exert a harmful action on that micro-organism. Careful examination, however, shows that the bacillus grows very well, and, provided enough of the virus be introduced, its growth becomes obvious to the most careless observer. The comparative immunity of rabbits against the *bacillus Chauvei* therefore is not due to the fluids of these animals not possessing sufficient nutritive material for this bacillus.

The lecturer then proceeded to criticise certain remarks made by Dr. Klein[2] referring to the description given by Metchnikoff of the destruction of anthrax bacilli by leucocytes when these are introduced into the lymphatic cavity of the frog. The lecturer stated he had found numerous phagocytes present in the normal lymphatic sac of the frogs he had examined. The absorption of solid particles introduced into the lymphatic sac of the frog took place by the agency of leucocytes. In another part of his paper Dr. Klein made no distinction between the action of living and of dead serum, and denied that immunity against a given infectious disease was in any way due to the action of the cellular elements of the blood. Dr. Klein now allowed that the bacilli perished in the interior of leucocytes, but he assumed that the bactericidal substance supposed to be present in the blood and lymph soaked into the leucocytes, and there exerted its curative effect. The lecturer contended that there was no evidence to show that this bactericidal substance, if it existed, did really soak into the cells. It was by no means proved that leucocytes took up everything they came across. For solids, it was an acknowledged fact that when carmine, vermilion, or any other powder was injected into the circulation, some cells might fill themselves to bursting, and others absolutely decline to touch it. There was some evidence to show that the amœboid cells of the body selected the chemical substances carried past them by the blood stream. That the cells of the kidney, liver, intestines, &c., absorbed certain chemical substances and rejected others had been clearly established, and the following experiment, which he had made more than two years ago in Paris, showed that some amœboid cells also—of the spleen, for instance—had this same power of selection.

A rabbit was injected through the lateral vein of the ear with a saturated injection of sulphindigotate of soda, until the mucous membranes, conjunctivæ, &c., were of a marked blue colour. As is well known, such an injection in no way interferes with the health of the animal, as the salt has no toxic effect. Four hours afterwards the animal was killed by inhalation of chloroform. At the post-mortem examination the liver and kidneys were of a dark-blue colour, the intestine below the opening of the bile-duct contained a large quantity of the salt, but the spleen was perfectly normal. Pieces of lung, liver, kidney, and spleen were immediately plunged in absolute alcohol, which was changed after one hour, and again next day. On examining the sections the salt was found in the epithelium cells of the kidney and liver, but not a trace could be discovered in any of the leucocytes of spleen, liver, or lung.

The lecturer then continued as follows: But I will admit, for the sake of argument, that the lymph finds its way into the leucocytes, and that it possesses bactericidal powers. Let us see what happens in a case where phagocytosis is well marked, and where the exudation is also very apparent. See, for instance, what happens when the *bacillus Chauvei* is inoculated into animals. Here signs of degeneration are seen often enough at the point of inoculation, but the degenerated micro-organisms are found in the leucocytes, and in the leucocytes only. Take anthrax, diphtheria, tubercle, and in all the bacilli which show signs of degeneration are those contained in cells. If Dr. Klein's theory be correct, therefore, we must conclude that the bactericidal substance, although present in the fluid, does not act outside the cells, but only inside them.

In another part of his lecture Dr. Klein states the cells seem to possess a particular chemical attraction for the bacteria, such as is possessed by certain chemical substances. Such attraction is spoken of as "positive chemiotaxis." Now, every experimenter, without exception, has spoken of the bacteria attracting the cells, and not the cells the bacteria. Clearly it is difficult to explain why, if the cells attract the bacteria, thousands of cells should migrate to the spot where micro-organisms are present, whereas if the bacteria attract the cells, the emigration of leucocytes can be readily explained. Lastly, Dr. Klein states that it has been proved beyond question that when the blood of an animal immune against a certain disease was injected into a non-immune animal suffering from the same disease the development of the disease is stopped. All I can say is that I wish it were so. There is not the slightest particle of evidence to show that the serum of an immune animal when injected into another animal acts in the way described by Dr. Klein. The blood of rats, which is alleged to cure diphtheria in guinea-pigs, is an excellent cultivating medium for the bacillus of diphtheria. The blood of rabbits, which is supposed when injected into mice to cure tetanus, is an excellent cultivating medium for the bacilli of tetanus. Nay more, rabbits are not immune against tetanus. It seems to me, therefore, that Dr. Klein is hardly justified in saying that, as regards the destruction of bacteria, the leucocytes might just as well be absent altogether.

Now let us see what really did happen in my experiments. We saw that both in guinea-pigs and immune rabbits the bacilli commenced growing as soon as they were introduced and that the leucocytes gathered to the spot where the micro-organisms had been introduced. We saw that the leucocytes were attracted to the spot by the chemical poisons secreted by micro-organisms, and that they violently attacked the micro-organisms, took them into their interior, and destroyed them. Notice that the cellular emigration at the point of inoculation varied inversely to the quantity and strength of the virus introduced, but was in proportion to the length and curability of the disease. Slight or even totally absent when a large quantity of extremely virulent bacilli was injected, the emigration of leucocytes was more marked when a few virulent ones were introduced, or when, the quantity of virus introduced being large, its virulence had been previously diminished. Notice, moreover, that whenever, from any cause, mechanical or chemical, the leucocytes were prevented from reaching the virus, the disease invariably progressed and the animal died. This was well demonstrated when, after enveloping the virus in filter paper, and allowing it to remain under the animal's skin, the protection of the paper was removed. It was proved that when the leucocytes were repelled by the action of lactic acid on one side of the body, the disease only developed on that side, and that when the cellular emigration was arrested by injecting the bacterial poisons into the blood-stream, the disease progressed with an appalling rapidity. What I have said of cellular emigration, however, by no means applies to the other necessary accompaniments of inflammation—namely, exudation. It rather would appear as if the two stood in some inverse relation to one another. Compare, for instance, the thin, sanguineous exudation of a rabbit dying in twelve hours from the inoculation of the *bacillus Chauvei*, and the thick, tenacious, "solid" material which accumulates around the virus inoculated into a resistant animal. Is that not evidence enough that, in this disease at least, exudation of fluid is always more marked when the disease is most virulent? But in spite of the enormous quantity of this exudation (supposed by some to have strong bactericidal powers), there is not a sign to show that the micro-organisms are injuriously affected by it. On the contrary, the latter grow and thrive excellently well, and acquire such an increased virulence that I should advise the

[2] Nature, March 12th, 1891.

greatest care to all those who are obliged to handle animals so inoculated.

Another point which stands out clearly is that when once the animal substances produced by a micro-organism have penetrated into the blood, the poisons secreted by the same micro-organism in other parts of the body fail to attract leucocytes. See, for instance, the results I obtained with the bacillus pyocyaneus. Injecting a drop of the culture into a rabbit's eyes, the leucocytes emigrated to the spot in large quantities. But when the poisons produced by the bacillus pyocyaneus were already circulating in the blood, the leucocytes no longer left the vessels. Notice again that the same result was obtained when the *bacillus Chauvei* was injected both subcutaneously and intravenously. In the case of the bacillus pyocyaneus, there is some evidence to prove that the leucocytes are actually paralysed; for Charrin and Gamaleia have shown that the application of croton oil to the ear of an animal poisoned with the products of the bacillus pyocyaneus is not followed by inflammatory reaction at the point where the oil is applied. This explanation, however, does not hold good for the results obtained with the *bacillus Chauvei*. Here the leucocytes in the bloodvessels and in the spleen were extremely active, but absolutely powerless to emigrate into the surrounding tissues, in order to attack bacilli of the same species. Their absence of emigration was not due to some change in the vessel-wall, however, for the leucocytes left the vessels to attack another bacillus—namely, the bacillus pyocyaneus. Similarly the leucocytes of an animal afflicted with anthrax declined to attack anthrax bacilli but cheerfully accepted any other diet offered them. And here again, the refusal to emigrate was not simply due to spasm of the vessels or any other vascular cause, as these same cells emigrated freely when any other stimulus was applied. The reason for these apparent anomalies is, that as long as the chemical substance which attracts the leucocytes is present outside the vessels only, the cells emigrate to the spot where this chemical substance is to be found; but as soon as this chemical substance is present in equal or larger quantities in the vessels as in the surrounding tissues, the leucocytes no longer attempt to leave the vessels.[2]

Having brought this paper to a conclusion, it remains but for me to thank the committee of management of the conjoint laboratories of the Royal College of Physicians of London and the Royal College of Surgeons of England and Dr. Woodhead for allowing me to carry out these researches in their laboratories. Not being a graduate of either of these colleges, I, more than anyone else, should feel grateful for the kind hospitality they have granted me in this building.

ON MATERNAL CONDITIONS IN CONGENITAL SYPHILIS.[1]

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PATHOLOGICAL LAWS supposed to govern the advent and progress of the phenomena of hereditary and of infantile syphilis have been enunciated, and by repetition widely promulgated; but it may be suspected that the alleged facts which are said to have revealed these laws have been more or less but opinions and conjectures, for of all diseases syphilis is one of the most capricious and irregular in its manifestations. At the discussion on syphilis at the Pathological Society Dr. Wilks said, "There is not a disease like it in our nosology"; and Mr. G. D. Pollock, the President, further said that, "when we have to deal with such a poison as syphilis, I think we must look at it entirely as a disease *per se*."

The far-reaching mischief of syphilis in the woman by the resulting contamination of her offspring offers a problem of momentous importance, which has still to be thoroughly solved. The arriving at all the facts in cases of hereditary syphilis is often difficult in a variety of ways, and sometimes it is only by a fortuitous concurrence of circumstances that these facts are laid bare. The degrees with which and the mode in which the state of the maternal blood, the condition of the uterine and allied tissues, affect the ovum of a woman the subject of constitutional syphilis, and the part played by the placenta in a syphilitic pregnancy, demand further investigation; and there still is some divergence of opinion as to whether the sperm of a once syphilised man can at any time and at all times poison the woman indirectly through the medium of the ovum or fœtus. Assuming such poisoning to be possible, we thus have, in the consideration of the maternal relations of hereditary syphilis, the mother on the one hand, and a possibly contaminated ovum on the other; since immediately the ovum is fertilised, it is no longer exclusively of the mother. Infection of the fœtus by the blood of a syphilitic mother would seem to be inevitable; nevertheless anomalies have been recorded. Where the woman has been the subject of direct infection previously to conception the road by which the disease shall reach the progeny would seem short. But we have to ask, When does the noxious quality of the blood first begin to injure the ovum? Is the ovum already syphilised when about to pass into the uterus? Is it syphilitic in the sense in which the seminal particles of a syphilised male are supposed to be syphilitic? Does the ovum, so to speak, carry its own syphilis, or is the contamination commenced only when it begins to absorb the maternal juices from the uterine walls?

The specific action of constitutional syphilis in the woman, however derived, may declare itself in the reproductive organisation, including the placenta, by giving rise to endometritis, to interstitial metritis, and to changes limited to the cervix. The placenta is involved by the endometritis persisting during pregnancy, and complications as regards the fœtus are entailed. Since Dr. Robert Barnes led the way in the study of the pathology of the placenta, Dr. Wilks and others have described syphilitic changes in that body. Dr. More Madden (in Quain's Dictionary) says that inflammation of the placenta is "generally syphilitic in its origin." The damage of the placenta by the maternal syphilitic cachexia or the escape of the placenta from syphilitic degeneration may carry the explanation of the remarkable phenomenon, in the case of twins, of one child being born diseased while the other child is born healthy—a phenomenon which M. Fournier in his recent work, "L'Hérédité Syphilitique," 1891), describes as being "one enigma the more in a subject full of enigmas." Such cases have been recorded by Campbell, Caspary, Diday, Hutchinson, Fournier, and others. Mr. T. Bryant in his "Surgical Diseases" relates that he "has notes of an instance of twins born of syphilitic parents. One went through all the series of complaints common to hereditary syphilis, and the other escaped altogether—that is, at the end of a year and a half no symptoms had appeared." Could it have happened in this case that there was a double placenta, and that the difference in the diathesis of the twins was due to a difference in the healthiness of the placenta? Mr. Bryant mentions another instance of twins "born under like circumstances, in which one child showed symptoms of hereditary syphilis at a month, and the other at four months." Now the degeneration of the placenta is mostly described as being unequally diffused, as being in circumscribed areas. This limitation of morbid change, if the placenta were not distinct, might have a share in the eccentric transmission of the syphilitic poison, but, all the same, the matter would be still enigmatical.

Syphilitic deterioration of the body of the uterus from constitutional syphilis and from carrying a syphilised fœtus may be illustrated by the following case. The patient had suffered from secondary symptoms previously to conception. A lady aged thirty-one consulted me this year on account of severe hypogastric pains, bearing down, and backache. She was married twelve years since, and is now a widow. Within a year of her marriage, being in India, she gave birth to a healthy child. Four months after this event she was infected by her husband, and had, as one of the consequences, rupial eruption, of which she bears marks. Sixteen months later a second child was born, which at the age of three months had symptoms of congenital syphilis (this child was for a long while sickly, and is described as being at present extremely excitable). Fifteen months later, having lost her husband (his death was accidental), and being pregnant, she returned to England, and bore a third child, which is now eight years old, and has not suffered from ill-health of any kind. At the date of the patient's visit to me I found the uterus very

[2] See also Massart and Bordet, Annales de l'Institut Pasteur, 1891.
[1] A paper read before the British Gynæcological Society.

much enlarged and excessively tender; there was abundant pus-stained leucorrhœa, menstruation being profuse and accompanied by pain. Treatment based on the assumption that a syphilitic dyscrasia was the cause of the symptoms has been followed by satisfactory results confirmatory of that view. As the mother's syphilis in India was recognised and treated, it is not altogether a matter of surprise that she did subsequently bear a healthy child; but it may be that the treatment was not sufficiently long continued, or was not renewed so as the eradicate the dyscrasia, which after ten years again has betrayed itself.

Constitutional syphilitic disease confined to the cervix may have as its most obvious symptom profuse leucorrhœa. A young woman in domestic service, a lady's maid, applied to me suffering from severe leucorrhœa. She reminded me that several years before, then very young, she had been under treatment by me in the Middlesex Hospital for secondary syphilis. She informed me that she was now about to be married. The speculum showed the cervix large, broad, and somewhat flattened, and upon its surface and around the os grey patches having the same general appearance as the patches of old-standing ichthyosis linguæ. I could discover no distinct engorgement of the body of the uterus. Had the patient not enlightened me as to her past history I should have found difficulty in diagnosis, as she presented no other tokens of old syphilis. She had never been pregnant. The question is whether the condition of the cervix would interfere with pregnancy, and whether, if pregnancy took place, the residuum of syphilis would prevent the patient bearing a healthy child.

A case of much more recent infection occurring during pregnancy, and having an exceptional history, followed by disease of the cervix uteri, came under my observation in November, 1889. Mrs. M——, when first seen by me, had a large indurated chancre on the lower lip, near the angle of the mouth. The lymphatic glands below the jaw were enlarged. She had been taking mercury under medical advice, and was severely salivated. After a short time all doubt as to the nature of the sore was removed by the eruption of a syphilitic rash, and the appearance of the characteristic sore-throat and of mucous tubercles on the vulva. She was confined in January, 1890. The infant was congenitally syphilitic, dying, it is said, of bronchitis at the end of fourteen weeks. I have lately seen the patient. The throat is no longer sore, but there remains some hardness (indistinct) at the cicatrix of the sore on the lip, which swells if she over-fatigues herself. There is a gummatous patch on the inner side of the left thigh, and a few spots of lepra on the same limb. Mrs. M—— has profuse leucorrhœa; the vagina is tender. The speculum shows the cervix enlarged, especially at its posterior lip, which is tumid and highly congested, and is bathed in a purulent discharge. The margin of the os is of a purplish red colour. Previously to the illness menstruation had been quite regular, but since very irregular, the intervals being occasionally five, six, and seven weeks; the flow lasts ten days, and clots are passed. The patient is rather pallid; the hair is thin, and inclined to fall. The source of the inoculation of the lip is a mystery. The husband has no trace of syphilis, and has never suffered from venereal disease. In this case, I may suggest that had pregnancy not occurred, perhaps the uterine tissues would have escaped. The fœtus, however, being contaminated by the blood of the mother, developed a new focus of infection within the uterus, and thus determined a syphilitic condition then in that organ.

A question that opens up a wide field of pathological speculation is the infection of the ovum by the blood of a mother who is herself congenitally or hereditarily syphilitic, and is one that does not appear to have been illustrated by many recorded examples, probably from the rarity of this form of transmission, and as well from the difficulties of obtaining reliable data. The following case, remarkable in more ways than one, was under my care as out-patient at the Middlesex Hospital. A woman nearly sixty of age applied with an oval sore, about ⅔ in. by ⅓ in. in measurement, on the radial side of the left index finger. It was alongside the free edge of the nail. It did not implicate the root of the nail like an ordinary whitlow, but was said to be extremely painful. The edges were slightly raised, the surface unhealthy, having one or two small sloughy spots. The sore, in short, had the character of syphilis; but as the woman was not a laundress or a midwife, I was at a loss to explain the occurrence of a syphilitic sore in such a situation. I observed, however, that the patient had old-standing palmar psoriasis. Two or three weeks after my first seeing the patient, a daughter of hers came and urgently begged me to visit her mother. I remarked that this young woman had signs of being hereditarily syphilitic: she had neither eyebrows nor eyelashes, and her upper incisor teeth were defective. The patient resided near the hospital, I found her to be suffering from the acute stage of secondary syphilis, eruption over the face and body, and sore-throat. I learnt that the daughter whom I had suspected of being the subject of hereditary syphilis was a married woman, and at the time was the mother of an infant a few months old. I had the opportunity of inspecting the child. It had snuffles, brown discolouration of the lips, with fissures and sore nates. I further learnt that the patient, the grandmother of the aforesaid infant, had been tending it, washing it, &c. It transpired that previous to the patient giving birth to the mother of the syphilitic infant, she had suffered from syphilis communicated by her husband, and that the palmar psoriasis above mentioned was one of the sequelæ. I obtained an interview with the father of the infant. He was, I may say, a person of unusual intelligence. I made the most critical examination of him, and I could discover no trace whatever of any constitutional syphilis, and he assured me he had never suffered from any venereal disease, a statement I could see no reasonable ground for disbelieving. Unless there lurks some defect in the evidence, here were three generations syphilitic from the same source, the disease in the two later generations being hereditary, the syphilis of the infant being an example of syphilis of the second generation. There could be no doubt that the grandmother had been syphilised, presumably by her husband, yet that syphilisation had conferred no immunity, and had not protected her from reinoculation, for the sore on the finger was a chancre, and was the initial lesion of the constitutional outbreak which I witnessed.

At the Pathological Society in 1872 I brought forward a case of syphilis of the second generation. It was that of a girl who at six years of age had disease of the lower end of the diaphysis of the femur affecting the intervening cartilage, the epiphysial cartilage, with the result of gradually producing a curve forwards of the bone from unequal growth of the anterior and posterior longitudinal halves of the bone by the time she was seventeen. No other bone was deformed, and therefore the disease which caused the deformity was not rickets. The mother of this patient was examined by me. She had deficient development of the right supra-orbital ridge of the frontal bone, and I ascertained that she had suffered when young from congenital syphilitic eye disease. The girl, her daughter, had, it would seem, inherited from her a liability to bone affection. Sir John Simon (then Mr. Simon) mentioned at the discussion on syphilis (1876) a case of syphilis of the second generation. Atkinson, in the *Archives of Dermatology* (1877), gives an account of a case of syphilis inherited through two generations. M. Fournier, quoting from *La France Médicale* (1889), says that Atkinson had reason eventually to feel less sure of his facts in that case. Further, M. Fournier remarks that the possibility of the transmission to the second generation, although it may rationally be imagined, requires more facts to make it irrefutably proven.

Infection of the mother by syphilis of the fœtus presupposes that the ovum can receive the syphilitic virus by impregnation—that is, through the semen. That syphilis can be so conveyed, although questioned by some, is almost universally admitted. Dr. Wilks, at the discussion above mentioned, expressed it thus: "A healthy man has a small amount of virus introduced into him, perhaps an infinitesimal amount, and the whole of his nature is changed. ..... The man brings into the world a number of puny, ill-formed children, and the result is seen in even the next generation." This was not traversed by any speaker who followed. Dr. Fournier stoutly maintains and elaborately illustrates[2] the transmission of the syphilitic virus by the sperm (the syphilis of conception), and the contamination of the mother by the fœtus so impregnated. Dr. Brandis of Aix-la-Chapelle writes to me that "in a good many cases we must feel very much inclined to believe in the very semen being the only medium of infection." Hutchinson goes so far as to say that in a large proportion of the cases met with in practice the taint is derived from

[2] Op. cit.

the father only. Bryant admits that a man in good health a year after all evidence of the disease has vanished may beget a healthy child, but he adds that if his health subsequently fails, the poison seems to have the power of reasserting itself, and his offspring may be feeble or diseased. And yet, it seems to me, one does not meet with children congenitally syphilitic in proportion to the number of fathers who have at some time or other suffered from constitutional syphilis, or with wives who have become syphilised by bearing children to such fathers. I have watched the children of fathers whom I have known to have suffered from constitutional syphilis some years before marriage, and I have not seen them to be marked by a hereditary taint. I acknowledge, however, that the experience of one practitioner taken alone is entitled to little weight in a question of such magnitude. But in such case either the patient had outgrown the syphilitic diathesis, or had been cured, or enjoyed especial immunity. As regards the transmission of syphilis by men who have married in the early months or years after having had primary syphilis it is far otherwise. Contamination of the wife and, if she become pregnant, of the fœtus is an almost certain disaster, and under such circumstances the poison remains in the woman ready to crop up with virulence long after, provided she has not been submitted to steady and repeated treatment. I was requested to see a lady who had been married some years, and had borne children, and who was staying in London for a short time. It was told me that she was suffering from piles. On examination I discovered no hæmorrhoidal trouble, but numerous mucous tubercles. On inquiry as to the history of miscarriages, I learnt that a few months after marriage she aborted, and she incidentally mentioned as a curious (to her) circumstance that about that time she completely lost her eyebrows and eyelashes. As this gave me sufficient clue to the nature of the case to guide me in treatment, for obvious reasons I made no farther research, but I took the husband (who I observed had marked palmar psoriasis) aside, and questioned him as to his antecedents. He disclosed to me that six months prior to his marriage he had been under treatment for chancre. I was enabled to refer to the surgeon whose patient he had been, and I was informed that at the date of his patient's marriage it was doubtful whether the induration at the cicatrix of the chancre had entirely disappeared. I have seen the eldest child of the marriage; he is liable to epileptic seizures. It is submitted, in a considerable proportion of the cases which are set down as contagion by the sperm, that the husband has married within a comparatively short time of having had chancre, and before secondary symptoms have been developed, or before they have been effectively treated. The discharges from some of the secondary lesions, or the secretions of some of the mucous surfaces of persons suffering from constitutional syphilis, have a contagiousness not exceeded by the discharges in congenital syphilis, which have been particularly characterised by Diday as differing from those of ordinary syphilis, by an infinitely greater power of contagion. It is by such discharges and secretions that the wife becomes directly contaminated, a contamination of which she remains ignorant. The initial lesion produced by contact with an individual the subject of constitutional syphilis may be so slight as to be easily overlooked; it may be a minute papule or superficial excoriation. I had the opportunity in private practice of verifying this. Two gentlemen who I accidentally discovered had had intercourse with the same woman came to consult me about the same time. In one there was a slight excoriation only, near the frænum; in the other nothing but a small papule on the *outer* surface of the prepuce; both patients, however, in due course had secondary symptoms. I obtained an inspection of the woman, and found that she was in an early stage of constitutional syphilis; she had mucous tubercles, sore-throat, &c. Without this inspection I could have given no certain diagnosis. The light thrown on the state of affairs by it enabled me to warn my patients of what was to be expected. I may say that I have not known an instance where, contrary to advice given by me with the deepest sense of responsibility, the man has married, that the wife escaped contamination, even when no pregnancy resulted from the marriage.

Can a mother who has been syphilised either directly or through the fœtus ever bear a perfectly healthy child? This is a most vital question. Does the syphilitic diathesis ever exhaust itself? To what degree of saturation with syphilis does repeated pregnancies by a syphilitic husband reach? Is there a law of gradual diminution of syphilitic intensity? Does a diminution of syphilitic intensity modify the appearance of syphilitic symptoms in the offspring, and can treatment help? One word in respect of treatment. I have observed, as doubtless everyone else has done, that specific treatment during the course of pregnancy appears to have little effect, and does not save the infant from congenital syphilis. I have supposed, in explanation of this, that the fœtus, being syphilitic already, as it increases in bulk continues to send a fuller stream of fresh virus to the mother, and thus the specific remedies are neutralised or overwhelmed. But when once the pregnancy is terminated, treatment has a fair field. It must then be steadily put in force, and must be periodically repeated. I believe it is only by the repetition of treatment that immunity can be gained. But may we not hope, when the methods by which Pasteur has obtained such mastery over many morbid poisons or processes, and the experiments of Koch and his followers have been more fully worked out, that we shall arrive at a further knowledge of the nature of syphilis, and get beyond a treatment which at the present time is almost empirical?

There is a maternal condition of vital importance to the child after intra-uterine life—namely, in the mother's capacity as nurse. Infection after intra-uterine life by the milk of the mother, who may have become syphilitic while nursing her child, or by the milk of the wet-nurse under similar circumstances, or who may already have been suffering from syphilis in its constitutional form at the time of her undertaking the duties of foster-mother, is a point that cannot be passed over, but I anticipate that the opinion of Dr. G. Gallois,[2] that the milk of even a syphilitic wet-nurse is preferable to artificial feeding, will not be endorsed. A case is recorded by Mr. Henry Morris in which infection by the milk of the wet-nurse appeared to be most probably the source of the patient's syphilis. In this case the five children antecedent to the diseased one were healthy, and a subsequent child was also healthy.

[2] Recherches sur la question de l'Innocuité du lait provenant de Nourrices Syphilitiques (1877).

Stratford-place, W.

TRACHEAL TUGGING IN AORTIC ANEURYSM.

BY JAMES T. R. DAVISON, M.D.,
FORMERLY RESIDENT PHYSICIAN TO THE EDINBURGH ROYAL INFIRMARY.

SINCE the publication of Dr. MacDonnell's cases in THE LANCET, illustrating the physical sign of tracheal tugging in aortic aneurysm, I have come across two cases of this disease in which the above-named sign was well marked.

A. B——, aged fifty-two, steward of a camp establishment. Complains of pain over the præcordia and corresponding space on the right side; pain radiates to back, encircling whole body; dry cough; occasional palpitation.

Previous history.—Has been healthy all his life, with the exception of occasional attacks of lumbago; has been a sober man; has had gonorrhœa, but never syphilis; has had several falls from horses; on one occasion he fractured the ensiform cartilage in the act of mounting on horseback.

Present history.—Eighteen months ago he began gradually to feel the pain of which he complains at present. The pain is chiefly over the præcordia, sometimes over the corresponding right side, and sometimes radiating backwards and encircling the body. The pain is of a dull character, and is aggravated by violent exercise of any kind. When the pain is very bad he finds great relief by sitting down and flexing the body over the abdomen. He is, nevertheless, able to attend to his work, which he effects on horseback. About nine months ago he began to suffer from a dry cough, which gets worse after violent exercise, when he also has a wheezing respiration, to relieve which and the accompanying pain he assumes the flexed position. Breathing quiet when not undergoing exertion. Occasionally he feels his heart thumping on his side. Eats well; has a good digestion. When in bed his easiest position is lying face downwards. He generally sleeps on his left side, which is his second best position. He is not so comfortable lying on his

right side, and still less so on his back. His left pupil is larger than the right. He has no difficulty in swallowing.

Physical signs.—Pulse strong, of moderate size, normal compressibility, regular. Radial pulses feel like cords to the touch. Both radial pulses appear to be equal, and are invisible. Left brachial pulsation visible; right one not so. Pressing deeply downwards over supra-sternal notch a pulsation is felt, though weakly. Cardiac impulse strong. Apex beat diffused, sixth interspace, extending close on to mammillary line. Vertical dulness, an inch and a half from the sternal border, begins at the fifth rib. No dulness over sternum. Transverse dulness not marked, but percussion note very resonant, showing probable overlapping of lung. Over mitral area first sound impure and somewhat prolonged; second sound loud. Over tricuspid same conditions, only that the first sound is inclined to become a murmur. Over two basic areas, as well as over upper half of sternum, the first sound is replaced by a systolic murmur, and the second sound is accentuated. Lungs in front: Percussion note resonant. Fremitus and vocal resonance present on right, absent on left side. Respiration well marked on right, extremely feeble on left side. Back: Percussion note resonant. Fremitus and vocal resonance well marked on right, feeble on left side. Respiration well marked on right, feeble on left side. Pulmonic expansion: Right apex 1c., left ½c.; right mammillary level 1½c., left ½c.; right base 1½c., left ⅝c. The vocal cords were examined by Dr. Mackern, and found to be normal. When the patient extends his neck and closes his mouth, a distinct tugging downwards of the trachea is felt with each cardiac contraction by taking hold of the cricoid cartilage and pressing it gently upwards.

This is evidently a case of aneurysmal dilatation of the whole arch of the aorta, with one or more local bulgings. The basic systolic murmur and accentuated second sound shows dilatation of the ascending aorta. The difference in the size of the pupils demonstrates that the descending portion is likewise affected; while the perception of pulsation behind and between the supra-sternal notch, the relief of pain on assuming the flexed position, the fact that he lies best with face downwards, and that the dry cough is worse after exertion, show that the transverse aorta likewise participates of the dilatation. The want of expansion of the left lung and its weak respiration, while its percussion note continues resonant, points to pressure of the left bronchus, which in this case must be due to a bulging of the dilatation in the transverse aorta, and which explains perfectly the presence of the tracheal tugging.

The next case is that of C. D——, aged forty-five, ship captain. He complains of pain over the præcordia and corresponding space on right side. Pain worse at night, but not worse on exertion. He can neither lie on his right nor left side on account of pain. He lies on his back, but after being in this position for some time he feels pains in both shoulder blades, which oblige him to sit up. He then bends his body forwards, and the pain completely disappears. These pains have been present for a year. He complains of coldness in the right arm, which has been present for the same period; also of pain and difficulty in swallowing solids, and refers the point of obstruction to upper part of sternum. With respect to liquids, he sometimes feels their passage uncomfortable, at other times not. Complains of hoarseness also of voice, of about one year's duration.

Previous history.—Six years ago had buboes. Four years ago had an attack of left hemiparesis. Three years ago was successfully operated on for popliteal aneurysm, from which he had suffered for eighteen months. Has not been a drunkard, but has drunk freely. Does not remember having had any falls.

Present state.—Radial pulse on left side weak, regular, easily compressible, somewhat large; artery inclined to be cord-like; right radial pulse almost imperceptible. Left brachial pulse corresponds in character to left radial; right brachial very weak. Both carotid pulses weak. Cardiac impulse extremely weak; appears to beat in the fifth interspace. Vertical dulness begins at fourth rib; transverse dulness at this level begins at left border of sternum, and extends seven centimetres outwards. Heart sounds very weak at mitral area; weak at tricuspid; at aortic and pulmonary areas first sound weak, second sound "thumping." Over sternal end of first intercostal space there is impairment of percussion note, and a pulsation is visible. Here also the thumping second sound is well heard. On pressing finger behind and between supra-sternal notch, no pulsation is felt. Pulmonic expansion equal on both sides. Lungs in front: Respiration equal on both sides; rather inclined to be weak. Percussion note resonant. Fremitus and vocal resonance not so marked on left apex as on right; present in right base, on left base fremitus very weak, and local resonance almost inaudable. Back: Percussion note resonant. Fremitus and vocal resonance normal on both sides. Respiration equal, inclined to be weak. Voice: Speaks hoarse. (Examination of throat by Dr. Mackern: Movement of vocal chords very fairly good; perhaps the right is somewhat more sluggish than left. Trachea rather anæmic, especially the posterior wall as far down as third or fourth ring; there seems to be a tendency to accumulation of mucus there, but no ulceration is visible.) When patient extends his neck, closing the mouth, a distinct tugging downwards of the trachea is felt whilst the cricoid cartilage is seized between the thumb and index fingers.

In this case we have also to deal with a general dilatation of the arch of the aorta, accompanied by a local bulging. The thumping second sound at the base speaks of dilatation of the ascending aorta. The difficulty in swallowing reveals dilatation of the descending portion of the arch. The relief of pain produced after lying on the back by assuming the flexed position shows involvement of the transverse aorta, while the impairment of the percussion note, together with visible pulsation at the sternal end of the left first intercostal space, points to a local bulging of this part of the artery. The coldness of the right arm and great weakness of the right brachial and radial arteries has been probably due to a thrombus of the right subclavian, as there are no signs of an aneurysm pressing in this direction. In this case the tracheal tugging has evidently been produced by the aneurysmal dilatation of the transverse aorta impinging against the trachea, and not simply by aneurysmal expansion over the left bronchus, as the respiration and pneumonic expansion were equal on both sides. The importance of this new sign of "tracheal tugging" is obvious. It may in some cases, perhaps, be the only sign of aneurysm we may possess, and certainly in many cases will be the sign that will make certain what was before a doubtful diagnosis. In cases of aortic incompetence of some standing where the heart has undergone considerable hypertrophy, and where consequently the carotid pulsations are very marked, great care must be observed not to mistake the impulse imparted by these to the cricoid cartilage with the downward tracheal tugging produced by an aneurysm of the transverse aorta.

Buenos Ayres.

NOTES FROM AN EPIDEMIC OF DIPHTHERIA.

BY J. A. WETHERELL, M.D.

THIS exposition contains the results, formulated below in the shape of a number of queries and comments, of the critical examination of over eighty cases. Is diphtheria infectious? If so, whence the source? The epidemic failed, if not absolutely negativing the idea, to prove the existence of a mediate contagion—that is, transmission directly, or from one to another through the intervention of an individual unaffected. It was a somewhat rare occurrence to find two cases under the same roof; even if the household comprised a family of six or seven children, with no attempt at isolation, the onslaught was restricted to the solitary infant. Surely under the generic term "diphtheria" must be included several different conditions of the throat, phases having, however, little in common of a single disease. Suppose—and this would solve the *quæstio vexata*—there are two varieties: (*a*) a contagious, and (*b*) a non-contagious or sporadic, the latter depending on hygienic defects. Atmospheric factors, changeable weather, undue moisture and warmth, exerted an at present unexplained influence over the spread of the contagium. Infectivity from animal to human kind by milk carriage or otherwise, or from scholar to scholar at school, was carefully searched for and excluded. Are there any known means by which to distinguish the inflammatory sore-throat, unaccompanied by membrane, the homologue and representative of the classical complaint, witnessed in a certain unascertained percentage of cases, as diphtheritic or otherwise? Diphtheria is primarily a

general constitutional disease, the local secondary manifestation or deposit showing on the tonsil or fauces, the position varying, during the second day of the fever or not at all. Here let me draw attention to the extraordinary rapidity with which the diphtheritic membrane is capable of appearing and vanishing, a few hours only being necessary for the completion of both acts. In this rests the secret of the so called cures by perchloride of mercury, iron, eucalyptus oil, &c. The post-diphtheritic throat redness, and enlargement of tonsils dotted with open follicular cavities, persist many weeks after apparent recovery, and might prove a source of contagion. The inference is forced upon the scientific mind that if the membrane fail to show itself, or become thrown off, no one can positively affirm that the person is or has been the subject of the specific complaint diphtheria. Confessedly, the differential diagnosis between this non-membranous form and the malignant sore-throat of bad drainage is impossible. What is the nature and frequency of the true, not accidental, rash which occasionally accompanies diphtheria? What are the distinguishing features between this exanthem and the efflorescence of scarlet fever? In the first the spots are apicular, reddish papules; to the touch they are very much like the shotty hillocks of goose-skin or lichen simplex. The individual points are isolated and acuminated from beginning to end, have no surrounding red areola, and never fuse together to form extensive patches. Occurring in about 4 per cent. of instances, and since they appear most frequently on the third day of invasion, when the temperature is either normal or a little above, the rash becomes differentiated from that of scarlatina or the evanescent and accidental roseola, the forerunner, in chance instances, of diphtheria, small-pox, &c. Generally limited to the hands, arms, and legs, it may cover the entire skin surface. The cuticle peels precisely as in scarlatina, although at not so late a period. Thus it will be observed there is a close affinity between diphtheria and scarlatina; indeed, so much so that often there is extreme diagnostic difficulty at the outset as to which of them a given case will develop into. Here is produced a single example of this intimate relationship. In a house with faulty drainage were under treatment at the same time a well-marked type of scarlatina and two of uncomplicated diphtheria. Can they be, though modifications, one and the same disease? Is there such a thing as hybridism, or may the germ, implanted on varying soils, give origin to either malady? When the poisons commingle, danger to life is proportionately increased.

Barnsley.

SUTURE OF THE ULNAR NERVE.

BY JOHN E. GARNER, M.D. ABERD.

D. S——, a young man, aged eighteen years, while playing with his brother in July, 1890, who had a large knife in his hand, accidentally turned round and cut him in the arm, dividing the right ulnar nerve in the thickest part of the arm about two inches below the elbow. Sensation along the course of the ulnar nerve in the arm was quite lost, together with all feeling on the inside of the ring finger and both sides of the little finger. Considerable muscular atrophy of the arm and the ulnar side of the palm of the hand followed. The abductor minimi digiti and flexor brevis minimi digit seemed quite lost, and the hand was quite flat on the outside. Galvanism, rubbing, and other means, I believe, were tried with no avail. On April 1st, 1891, nine months after the accident, the ulnar nerve was sutured. It was with considerable difficulty that the ends of the nerve could be found; they seemed to have become continuous with the surrounding tissues, and the cicatricial tissue seemed to make the ends still more tedious to find. At last I found the nerve, and then traced it up to its divided end. Having got one end out, the other end was found by at once cutting down on the course of the nerve from the ulnar and tracing it to the divided end. If in future I have the same operation of suturing a divided nerve, I shall make the incision sufficiently long to be well on each side of the cicatrix, so that the nerve can be dissected out to its divided seat from above and below respectively. The nerve having at length been found, I vivified the ends, and with two fine silk thread sutures brought the cut or divided ends into nice apposition. The wound was then thoroughly cleaned out, all points of hæmorrhage stopped, stitched up, and dressed with dry dressings. The wound healed up uninterruptedly with no drawbacks.

On April 2nd (the day after the operation), at 9 A.M., which was three hours short of twenty-four hours from the time the nerve was sutured, the boy could feel distinctly when I touched him on the fingers or on the arm. On the 3rd (the second day after the operation) I asked the father of the boy to test his sensation. He did so with a feather by drawing it along the arm and on his fingers. Sensation was quite evident; the boy could feel distinctly whenever he was touched. I examined him again on Oct. 26th, 1891. The arm was considerably increased in size, but the palm of the hand on the ulnar side was still very much atrophied. The sensation along the course of the ulnar nerve still remained good. He could feel a pen lightly drawn along the course of the nerve, or over the parts supplied by it.

The early return of the sensation after the suturing of the nerve seems very extraordinary; still, it is a fact, and it certainly did occur.

Preston.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, l b. iv. Procemium.

SEAMEN'S HOSPITAL.

A CASE OF HEPATIC ABSCESS; OPERATION; RECOVERY.

(Under the care of Dr. JOHN CURNOW and Mr. JOHNSON SMITH.)

THE following case is an example of the successful treatment of hepatic abscess by incision and drainage after resection of part of the chest wall. This part of the operation, resection of a piece of rib, is required very seldom in the evacuation of pus from a liver abscess. Another point in the operation is the attachment of the thickened capsule of the liver to the edges of the wound by means of sutures. Dr. Chauvel,[1] who has reported cases of this kind, says that the attachment of the capsule to the wound is "useless and possibly dangerous," but it was found to present advantages here. For the report of this case we are indebted to Dr. M. H. Spencer, house physician.

Michael M——, aged thirty, was admitted into the Seamen's Hospital on Aug. 15th, 1891, suffering from dysentery. The dysentery commenced six weeks before, when the patient was in Calcutta. The stools contained a good deal of blood and slime, and were at first very frequent, but had become less so lately.

On admission there was marked tenderness over the cæcum, but none elsewhere; the tongue was dry and rather furred; the temperature 101·2°. During the next ten days the patient's condition improved somewhat, but the dysentery, although checked, was not completely stopped. On August 24th pain was first complained of over the liver; no enlargement of the organ was detected. On the 26th the dysentery had stopped, but there was still pain over the hepatic region, and a tender spot was detected below the costal margin on the right side. The temperature was generally above 100° at night, falling to normal in the morning. On Sept. 5th the pain was still severe, and prevented sleep; the temperature still kept above normal. Mr Smith introduced the needle of an exploring syringe between the seventh and eighth ribs on the right side, near their junction with the cartilage, and at once drew off a syringeful of pus. On the next day ether was administered and the abscess was opened, a portion of the seventh rib and its cartilage being removed and a large drain inserted. The abscess cavity was the size of a large apple; there were firm adhesions between the liver and the parietes in front of and below the opening, but, above, the finger could be passed freely over the upper surface of the right lobe. After incision of the liver the edges of the thickened

[1] Archives Générales de Médecine, Aug. 1889.

capsule were fixed by fine silken sutures to the edges of the external wound. For the next week there was considerable discharge from the wound, and the temperature kept up; but on Sept. 16th the discharge had so much diminished that a small tube was substituted for the large one, and the temperature, which had now fallen to normal, did not again rise above it. Ten days later the tube was removed altogether, as there was practically no discharge, and the wound was allowed to close. Convalescence was slightly retarded by the presence of diarrhœa, which, however, was kept in check without much difficulty by astringents and appropriate diet. The patient now rapidly gained flesh and strength from day to day, and on Oct. 17th, about five weeks after the operation, was able to leave the hospital, the wound having completely healed.

TEWKESBURY HOSPITAL.

A CASE OF FRACTURE OF THE BASE OF THE SKULL; RECOVERY.

(Under the care of Mr. W. DEVEREUX.)

WE publish this interesting account of a fracture of the base of the skull as showing the extent of injury from which recovery may ensue. In all probability the fracture extended across the middle fossa from side to side, as indicated by the profuse hæmorrhage from the ears and pharynx, followed by discharge of cerebro-spinal fluid from the right ear. Paralysis of the facial nerve[1] was noticed to be present (additional evidence of fracture in the middle fossa if such were needed), but this subsided in a fortnight, and was probably of inflammatory origin. The application of the leeches when headache came on gave great relief to the pain of which the boy complained. The use of them in these headaches is very efficacious.[2]

T. D——, aged sixteen, a healthy-looking boy, was admitted into the hospital at 10.30 A.M. on Sept. 9th, with the history of having, an hour previously, slipped and fallen backwards, striking the back of his head against the wheel of a waggon.

On admission the patient was unconscious, and there was profuse hæmorrhage from the nose and both ears. On examining the throat, there was found to be considerable oozing from the top of the pharynx. There was a great deal of swelling at the back of the head below the superior curved line of the occipital bone. The surface of the body was cold and clammy, and the pupils were contracted. Temperature 96°; pulse 90. About fifteen minutes after admission the bleeding from the nose ceased, but the oozing from the ears and top of the pharynx continued. Evaporating lotion was applied to the head, and hot bottles to the feet and sides. The ears were dressed with iodoform and cotton wool. At 12 o'clock the patient was semi-conscious. At 8 P.M. consciousness had completely returned. The patient lay curled up on his side and was continually calling out about his head. The oozing from the pharynx had ceased, but there was still some blood coming from the ears. There had been no retention of urine. He had taken a little iced milk. Three grains of calomel were administered. Temperature 101°; pulse 110.

Sept. 10th.—The patient passed a very restless night, continually crying out about his head, and was slightly delirious towards morning. At 12.15 A.M. he vomited a large quantity of blood. The bleeding from the ears has ceased, but there is some oozing of cerebro-spinal fluid from the right ear. The patient is perfectly conscious, and complains of headache, especially on the right side. Temperature 97·8°; pulse 80. Towards evening the headache got worse, and the patient became extremely irritable, lying curled up in bed with his eyes closed and refusing to open them. There is a slight convergent squint of the right eye. The swelling at the back of the head has much diminished. The oozing of cerebro-spinal fluid from the right ear ceased this evening. Temperature 99·6°. As the bowels have not been opened, three grains of calomel were again administered.

11th.—The patient has passed a very restless night, sleeping only a few minutes at a time. The headache this morning is very violent. Temperature 99·4°. An enema was administered, and produced a free evacuation of the bowels. The headache increased greatly in violence during the day, the pain being especially severe behind the right ear. Patient also exhibited signs of considerable cerebral irritation, and towards evening he became slightly delirious. Temperature 100°; pulse 110. Three leeches were applied behind the right ear at 9 30 P.M.

12th.—The patient was rather restless last night until 12 o'clock, but afterwards he slept fairly well. This morning there is no headache or sign of cerebral irritation. Temperature 98·6°. The external rectus of the right eye is completely paralysed. Patient takes his food well. Evening temperature 99·6°.

13th.—The patient has passed an excellent night and is very lively this morning. There has been no return of the headache Temperature 98·6°.

14th.—The patient has again passed a good night. This morning the right side of the face was noticed to be completely paralysed, and the patient was deaf in the right ear.

From this date the patient made an uninterrupted recovery. Under the influence of galvanism the facial muscles recovered their proper power by Sept 28th, hearing being restored about a week previously. There was no return of power in the external rectus of the right eye.

[1] See lectures on Injuries to the Head, THE LANCET, vol. ii. 1890, p. 63. [2] Ibid., p. 114.

Medical Societies.

OPHTHALMOLOGICAL SOCIETY.

Orbital Hæmorrhages in Young Children.—Implantation Cyst of the Cornea.—Hereditary Optic Atrophy.

AN ordinary meeting of this Society was held on Thursday, Dec. 10th, the President, Mr. Henry Power, F.R.C.S., in the chair.

Mr. HOLMES SPICER read a paper on Orbital Hæmorrhages in Young Children occurring beneath the periosteum in the course of infantile scurvy, the disease being generally known as scurvy rickets. Hand-reared infants were the subjects of the malady, and were generally between six and eighteen months of age. After a period of ill-health, spontaneous hæmorrhage took place beneath the periosteum in various parts of the body, sometimes, but not always, during an attack of rickets. In the orbit the hæmorrhage occurred either as a line of blood-staining at the orbital margin or as a large effusion, producing displacement of the eye and of the upper lid, the form assumed being due to the anatomical disposition of the parts in the orbit. The hæmorrhage subsided rapidly at first, but did not disappear entirely, the eye being left prominent for many months. The treatment was essentially that of scurvy; in addition to the ordinary food, juice of fresh meat, a little fruit or vegetable, cod-liver oil, or cream should be given. The slighter cases recovered rapidly; the more serious ones were slow in progress, and often proved fatal.

Mr. TREACHER COLLINS exhibited an Implantation Cyst of the Cornea. The eyeball had been removed from a boy aged twelve a year and nine months after the infliction of a perforating wound of the lower part of the cornea by a stick. Situated partly on the cornea and partly on the sclerotic, at the seat of injury, was a large cyst, measuring 9 5 millimetres laterally and 5 millimetres antero-posteriorly. This was found, microscopically, to be lined by laminated epithelium, the most flattened cells being towards the interior of the cyst. Since no epithelium exists normally in the parenchyma of the cornea, Mr. Collins thought that the only explanation of the formation of this cyst that could be offered was that it had resulted from the implantation of a portion of the surface epithelium into the substance of the cornea, and that this epithelium had subsequently grown and proliferated, some of the cells undergoing mucoid degeneration, thus forming the fluid contents of the cyst.

Mr. JOHNSON TAYLOR (Norwich) read notes of four cases of Hereditary Optic Atrophy occurring in one family. The history as to heredity was scanty, the maternal grandmother being the only relation whose sight was known to have been defective; she became blind, or nearly so, when aged forty. The cases described included four male children in a family of eleven—namely, the first, second, fifth, and eighth; the remaining children, five females and two males, being unaffected. In the first case sight failed rapidly but unequally in the two eyes at the age of twenty-seven. In

the second case failure began at the age of twenty-one, and progressed quickly till the vision was reduced to less than 20 J. with the right eye and 18 J. with the left. In the third case defect was discovered at the age of eighteen, and at that time one eye alone was affected. In the fourth case sight was found to be bad when the child was only six years old. For about a year he seems to have been nearly blind, but since then vision has improved, so that with the left eye he can read some words of 1 J.; the right eye sees 20 J. badly. In all the cases there was marked central amblyopia, with colour defect more evident in the central part of the field, and in addition there was some loss of the periphery of the field. The ophthalmic appearances in each case were those of optic nerve atrophy, with slight haziness of the discs and some obscuration of the lamina cribrosa. As is so generally the case, there was a complete absence of symptoms of disease of brain or spinal cord. The three older patients were smokers, but, with the exception of the first, could not be said to smoke excessively. There was no family history of nerve disease.—Dr. HABERSHON said he had been much interested in Mr. Taylor's report of his cases. He had some years previously read a paper on this subject before the Society, in which he had given notes of a number of cases which he had diagnosed as belonging to that form of optic nerve atrophy first described by Leber. He noticed that in Dr. Taylor's cases there was peripheral contraction of the fields of vision in addition to central scotoma. In the original paper Leber laid stress on the presence of central defect without any contraction of the fields. He had expressed the opinion in his previous communication to the Society that there were probably two or three factors to be considered in the causation of the disease. In many cases it seemed likely that one of these factors was tobacco.

The following living and card specimens were shown:—

Mr. JULER: (1) Symmetrical Orbital Tumours; (2) Persistent Hæmorrhages in a case of Diabetes; (3) Unusual Growth in the Vitreous.

Mr. JOHNSON TAYLOR: Intra-ocular Growth of doubtful nature.

Mr. F. R. CROSS: (1) Essential Shrinking of the Conjunctiva ("Pemphigus"); (2) Opaque Nerve Fibres covering the Optic Disc.

Mr. TATHAM THOMPSON: Case of Leber's Hereditary Optic Atrophy.

SHEFFIELD MEDICO-CHIRURGICAL SOCIETY.

THURSDAY, DEC. 3RD, 1891.

Mr. W. DALE JAMES, Vice-President, in the chair.

Spinal Injury.—Mr. WEST JONES showed two cases of spinal injury with displacement of dorsal vertebræ. Both were colliers, and in both cases the injury was caused by a fall of coal or rock on the head and shoulders, forcibly and suddenly bending the spine forwards. G. G——, aged forty-five, was injured in this manner on May 10th, 1887. When first seen he all had the appearance of a person asphyxiated, face blue and congested, eyes very bloodshot. There was a considerable prominence about the lower dorsal vertebræ. The right arm and leg were paralysed. The bladder was not affected. Recovery was gradual, the paralysis lasting about three weeks. He was able to resume work twenty-seven weeks after the accident. L. J——, aged thirty-four, received a similar injury while at work on Dec. 22nd, 1890. The swelling over the spine was in almost exactly the same situation as in the other case. In this patient there had been complete paralysis of the lower extremities and of the bladder. The latter lasted fourteen weeks, and the legs recovered more gradually. He was able to resume work on July 20th.

Melano-sarcoma.—Mr. SNELL introduced a patient, a woman aged thirty, with a large melano-sarcoma involving the upper part of the conjunctiva for the middle third. There was a vague history of injury in childhood. The eye itself did not appear to be involved, and vision was normal. Mr. Snell also showed sections of two Tumours (Sarcoma) of the Ciliary Body and adjacent regions. Both occurred in private patients within a few days of each other. Both were women, one aged thirty-seven and the other fifty-three. One was in the left and the other in the right eye. He also exhibited a large Melanotic Sarcoma which had perforated the back of the eyeball. The patient was a man aged about sixty.—Dr. SINCLAIR WHITE made some remarks.

Notes of Fifty Cases of Enteric Fever.—Dr. J. E. GOULD read notes of fifty consecutive cases of Enteric Fever admitted into the Sheffield Borough Fever Hospital. There were four deaths, all occurring in males between the ages of fifteen and twenty-five. In seventeen cases the temperature reached 103°, in eighteen 104°, and in seven 105°; in only eight it remained below 103°. It became normal in thirty-one cases between the twenty-first and twenty-eighth day, and in the others between the twenty-eighth and forty-second day. Diarrhœa was the exception, in thirty-eighth of the cases the motions not being more than two a day. Spots were noted in thirty-three of the cases, although some of them were not admitted into the hospital until the end of the second week. Relapses occurred in ten cases, hæmorrhage in five cases without any deaths, perforation and peritonitis in one case, and pneumonia in two cases. A trial was made of β naphthol in several cases, but not with any hopeful result.—Mr. James, Mr. B. Walker, Dr. Hunt, Dr. Martin, Dr. Burgess, and Dr. Littlejohn joined in the discussion.

Condensed Milk.—Dr. CLEAVER read a paper on Condensed Milk as Food for Infants, in which he strongly advocated the use of condensed milk where the natural supply had failed, and when cow's milk, after a trial, had shown that it was not suitable for the infant. The sweetened form of condensed milk was not all that could be desired, as the large amount of cane sugar which it contained produced acidity and flatulence, and it was often necessary to dilute it to such an extent that the food was given in too watery a condition; but in the unsweetened form of condensed milk we had an admirable substitute for mother's milk.

MANCHESTER PATHOLOGICAL SOCIETY.

WEDNESDAY, DEC. 9TH, 1891.

T. A. RAILTON, M.D., M.R.C.P., President, in the chair.

Ectopic Gestation.—The SECRETARY showed for Dr. G. J. ROBERTSON the preparation from an unusual case of Ectopic Gestation.

Acute Meningitis.—Dr. MILLIGAN related the notes of a case of Purulent Meningitis following Chronic Suppurative Middle Ear Disease, and showed the specimen. The patient, a boy aged seven, had suffered from purulent middle ear disease of the right side since infancy. The external meatus was found almost occluded by a large vascular polypus growing from the superior and posterior walls of the tympanic cavity. Diseased bone was found upon posterior wall of external meatus, and a sinus led into the mastoid cells. Pain was complained of over the mastoid antrum. Temperature 102° F.; pulse 130; respiration rapid. Occasional twitching of muscles of arm and leg. Conjugate deviation of eyes was also present. The mastoid antrum was opened and thick cheesy pus evacuated, and diseased bone scraped away. Death occurred ten hours after operation, the temperature having risen to 105° F. At the necropsy the base of the brain was found floating on pus, which also extended up over a portion of the left cortex. The pus was found to have entered the cranial cavity along the sheath of the auditory nerve. Dr. Milligan made some remarks upon the various intracranial complications following middle ear disease, with special reference to the paths along which septic matter may travel from the middle ear to the structures within the skull.

Optic Tracts in Unilateral Atrophy.—Dr. WILLIAMSON exhibited microscopical specimens showing degeneration in the optic tracts and chiasma in a case of unilateral optic atrophy. The specimens were from a patient whose right eye had been completely blind for four years previously to her death from cardiac dilatation. Blindness had come on quite suddenly shortly after rheumatic fever. Ophthalmoscopic examination showed marked atrophy of right optic disc. No perception of light on the right side. Left eye: Vision, fundus, and field of vision normal. Microscopical examination of sections, stained according to Weigert's method, showed: 1. Almost complete absence of nerve fibres in the whole of the right optic nerve; left optic nerve normal. 2. In the first transverse vertical sections of the chiasma nerve fibres were absent from the right half, with the exception of a small transverse bundle at its inferior

surface; the left half composed of normal fibres. Nerve fibres at inferior surface of right half soon increased in number, and a small tract of degeneration appeared at the inferior surface of the left half running outwards and a little upwards. Passing backwards, the degeneration in the right half gradually diminished and became limited to the superior surface, whilst normal fibres increased on the inferior. The band of degeneration in the left half gradually increased, and then in the posterior part of the chiasma diminished again. 3. Optic tracts: Left smaller than right. Naked-eye examination revealed a pale area in the centre of right tract, but not in the centre of left tract. Microscopically, there was an increase of connective tissue, and a diminution of nerve fibres in the centre of the right tract. In the left tract was a small area at the inner half of the inferior surface, in which connective tissue was increased and nerve fibres scanty. A similar, but much narrower, zone extended along the periphery of the inferior and outer side of the tract. The changes in the tracts occupied the same position almost up to the external geniculate bodies.

New Growths.—Mr. WILLIAM THORBURN showed drawings and described the appearances of a tumour of the anterior lobe of the pituitary body, accompanied by a large hæmorrhage, and also exhibited specimen of Melanotic Alveolar Sarcoma taken from the skin of the side of the chest of a boy aged fourteen, and apparently the result of a blow received about a month before the case was seen.

Specimens.—Mr. HERBERT LUND showed two preparations: (1) Sac from a case of Hernia; (2) Cyst apparently Omental in Origin.

NORTHUMBERLAND AND DURHAM MEDICAL SOCIETY.

THURSDAY, DEC. 10TH.

W. GOWANS, M.D., President, in the chair.

THE PRESIDENT showed two cases in which he had got very good results from Wheelhouse's operation for stricture. Drs. Hume, Anderson, Benington, and Murphy discussed the method of treatment.

Dr. HUME showed a girl, aged five and a half years, on whom three years ago he performed Gastrostomy for Stricture of the Œsophagus, following the swallowing of liq. potassæ. Since the operation dilatation of the stricture had been tried, but failed. Dr. Hume also showed a man on whom he had performed inguinal colotomy three years and a half ago for Cancer of the Rectum. The patient still continued in good health, and works as a day labourer.—Drs. H. S. BAUMGARTNER, A. E. MORISON, and RUTHERFORD MORISON related their experience of similar cases.—Dr. OLIVER and Mr. WILLIAMSON showed a man recovered from Suppurating Hydatid of the Liver treated by incision and drainage.

Dr. VANN showed a large Mulberry Calculus removed by the supra-pubic method, the patient recovering.—Dr. H. S. BAUMGARTNER showed: (1) a Hand Amputated for Sarcoma, which developed two weeks after patient was confined; (2) a large Solid Ovarian Tumour, which under the microscope was found to be a fibroma; (3) Tubes and Ovaries removed for old pelvic inflammation.

Mr. RUTHERFORD MORISON gave a demonstration of the uses of Senn's plates.

NEWCASTLE-ON-TYNE CLINICAL SOCIETY.

THURSDAY, DEC 17TH.

WALTER RIDLEY, F.R.C.S., President, in the chair.

Lupus of Left Leg.—Spastic Paraplegia.—Antrum of Highmore.—Locomotor Ataxy.—Dr. H. AITCHISON showed a case in which he had performed amputation at the hip-joint for extensive Lupus of the Left Leg. The operation had been carried out by means of transfixion and the formation of anterior and posterior flaps. A very good stump was formed.—Dr. GEORGE MURRAY showed a case of Spastic Paraplegia. There had been an attack of syphilis eight years ago, and the symptoms first appeared four years ago. The patient had weakness of the legs and a typical spastic gait. There was great increase in the myotatic irritability as shown by exaggerated knee-jerks and the presence of ankle-clonus and "clasp-knife" rigidity. The elbow-jerk and wrist-jerk were also increased, though the motor power of the arms was good. Sensation was only slightly affected over the outer part of each leg and the dorsum of the foot. He was unable to retain his urine for more than three or four hours, and had lost sexual power.—Dr. W. ROBERTSON illustrated the use of the electric light in the diagnosis of diseases of the Antrum of Highmore. He showed a case of double empyema of the antrum, and advocated the treatment of such cases by making an opening into the antrum from the front for irrigation and drainage.—Mr. MORISON and Dr. COLEY made remarks.—Mr. RICHARDSON showed a case of old Locomotor Ataxy with Charcot's disease of the wrist-joint, which came on some time after an attack of arthritis in the joint following an injury had subsided. Sloughing had taken place at two different points, with discharge of synovial fluid. He also showed a case of old Sub-astragaloid Dislocation.

Empyema.—Mr. LYON SMITH read notes of a complicated case of Empyema. This was followed by a discussion on the surgical treatment of empyema, in which Drs. Coley, Morison, Gibson, Aitchison, G. Murray, H. Baumgartner, and Black took part.—Mr. SMITH briefly replied.

Specimens.—Dr. H. AITCHISON showed a Uterus which he had removed from a small woman who had suffered from rickets by Porro's operation. The stump had been secured by indiarubber tubing and knitting needles as recommended by Mr. Lawson Tait. The child lived and the mother made an excellent recovery.

Notices of Books.

The Pathology, Diagnosis, and Treatment of Intra-cranial Growths. By PHILIP COOMBS KNAPP, A.M., M.D. (Harvard). Boston: Rockwell and Churchill.—In this interesting monograph the author has statistically cally summed up what we at present know of intra-cranial growths in their various phases. The substratum of his work is a series of forty cases with necropsies, many of which had come under his own observation, and he has enriched those observations by numerous references to cases recorded and to inferences drawn by others; so that the work forms, as it were, a compendium not only of the statistics as to the nature, time of occurrence, &c., of intra-cranial tumours, but also of the symptoms most commonly present with tumours in various localities, as well as the conditions in an equally important class, which is rather characterised by an absence of symptoms which could lead to a diagnosis. The book almost in its present form was the Fiske Prize Essay, and is divided into various sections, dealing with etiology, pathological anatomy, symptomatology, &c., and it forms a most excellent summary of our knowledge of a subject which, in spite of much recent work, is still in many of its aspects full of obscurity. The chapter on treatment is an interesting one, and especially the second part, in which an attempt is made to discover the probable percentage of those cases in which operative interference would be likely to be beneficial. The inference drawn is that in a certain percentage of cases the tumour is of such a nature and in such a position that it can with safety be removed; and while the percentage of such cases may seem small, it must be remembered that more correct localisation is becoming daily more easy, and that this will naturally lead to a greater hope of successful surgical interference.

Medical Publications: Harvard Medical School. 1890.—This volume is a collection of papers and essays thrown together to show the character of the original work done by the instructors of the school, or under their personal supervision. Only one clinical paper has been included. Dr. Dwight contributes two careful anatomical papers: one on the Sternum as an index of sex, height, and age, with an account of an extremely interesting case of irregular

union of the sternum, the first piece of the gladiolus having joined the manubrium before its union with the second portion of the gladiolus; and another on the closure of the cranial sutures as a sign of age. As a result of a careful series of experiments upon the action of Iodoform, Dr. Jeffries concludes, with Heyn and Rovsing, that iodoform has no direct action as a germicide, but that it markedly retards the growth of bacteria, diminishes the foul odours of putrefaction, and lessens serous oozing from a wound. Dr. Bryant has investigated the valves in the veins of the human intestine. He finds that at the time of birth the valves are numerous, especially in the veins of the large intestine. With few exceptions, however, they become incompetent or disappear altogether in a few months. In the adult a very few may be found in the veins of the small bowel, particularly the jejunum. Dr. Ernst contributes a paper on the very important question of the Relation of Tuberculosis to Cow's Milk, in which he describes a series of experiments carried out under the auspices of the Massachusetts Society for the Promotion of Agriculture. So far as they go they show that the milk from cows affected with tuberculosis in any part of the body may contain the virus of the disease, and that the virus is present whether there is disease of the udder or not. Dr. Bowditch contributes two elaborate papers on the Knee-jerk, and Dr. Collins Warren a clinical essay on Trephining for Fracture of the Base of the Skull. The whole series is eminently creditable to the body from which it emanates.

The History and Progress of District Nursing. By WILLIAM RATHBONE, M.P. Macmillan and Co., London and New York. 1890.—A scheme which aims at providing the sick poor in their own homes with the advantage of skilled nursing is, on the face of it, as useful as humane. The book before us is concerned with such a scheme. The history of district nursing as here narrated by Mr. W. Rathbone suffices to prove that success in practice has not been wanting to justify the friendly purpose in which it arose. The duties and privileges of the visiting nurse are described with sympathetic good sense. The method of her training, its relation to existing organisations, and its prospects are stated in due detail. Of particular interest is the story of the Liverpool Training School, of which the National Association, with its later and greater development, the Victoria Jubilee Institute, is but the gigantic offspring. A comparison between the metropolitan and provincial methods is instructive. As regards the former, we cannot but think that the rule which admits only ladies to the nursing ranks, notwithstanding certain advantages, will admit of liberal relaxation. On the other hand, the Liverpool system of granting charitable relief with nursing, if applied at all, should clearly be used with sparing discretion. Even the poor man, as a rule, can thus far help himself, and wherever possible he should be allowed to do so. On the whole, we can recommend this little volume as a careful summary of work, and in some sense as a guide-book also, to public notice, and especially to that of those intending to be nurses.

Whitaker's Almanac, Office, 12, Warwick-lane, Paternoster-row.—This valuable production is one of the hardy annuals which herald the approach of another year, and that for the year 1892 will by no means diminish the reputation which the Almanac has acquired. Additional space has been allotted to educational matters, and a separate article to the subject of agricultural education and the possible results which may be expected from its extension. Each year the difficulty of varying the contents of the work becomes greater, and it is only by steady enlargement of the work that space can be obtained for the admission of such matter as is necessary to ensure its completeness.

BERI-BERI.

WE have received a copy of the annual report of Mr. A. W. Sinclair, the residency surgeon and health officer, Selangor, together with some notes on beri-beri as observed by him in the Malay Peninsula from 1882 to 1888. Confining ourselves at present to the latter subject, it may interest our readers to learn some of the results of these observations. Among the various and ingenious attempts that have been made to solve the derivation of this term Mr. Sinclair seems to think it most probable that beri-beri was derived from the Sanscrit "bhara," a weight, the repetition being used simply to intensify the meaning of the word. Every patient affected with the disease describes the principal symptom as a weight in his chest, legs, or arms, as the case may be. Beri-beri appears in the Malay Peninsula both in the endemic and epidemic form. It principally attacks the Chinese coolies working in the tin mines, but it is not peculiar to them, as it affects other nationalities also, and men, women, and children. After a description of tin mines and of the coolie houses, the pollution of the adjacent streams and general disregard of sanitation at different stations in the different districts visited, Mr. Sinclair, in considering the etiology of the disease, adverts to poor living, bad clothing, poor accommodation, and exposure as among the principal causes of the disease, and points out how those who are better off in these respects than the ordinary coolie, and can take ordinary precautions against debilitating causes and exposure, avoid contracting the disease. It seems that, in many cases, at any rate, beri-beri is preceded by repeated attacks of fever, ending in swelling of the abdomen and legs. Mr. Sinclair describes the symptoms of the disease as commencing with a feeling of malaise, followed by weakness and rheumatic pains in the joints, and a dull continuous pain in the stomach and in the knees, passing down into the feet, attended by a feeling of numbness and swelling of the parts, with œdema. Occasionally there is atrophy of the muscles of the legs, with loss of power, without any swelling, and in those cases the arms are often similarly affected. The pulse is generally soft and compressible. There is a thrill over the region of the heart, and hæmic murmurs and strong pulsations in the sternal notch are present. Knee- and elbow jerks are usually absent. The peculiar gait is well marked, the foot being thrown forward with a jerk and raised considerably, the toes coming to the ground first. There is generally an inclination to fall on closing the eyes and bringing the feet together. As a rule, there is no loss of sensation; sometimes there may be aphasia. There is a feeling of suffocation on lying down. The patient may die soon after the attack, or linger on for five or six months—rarely longer; he commonly dies suddenly and in much pain, described as of a burning character, in the chest and abdomen. The post-mortem appearances are mainly indicative of congestion and enlargement of the internal organs, with dropsical effusions, especially in the pericardium, and œdema of the lungs. Mr. Sinclair mentions that in the post-mortem examination of 100 Chinese dying of the disease the anchylostoma duodenale was discovered in the intestines in eighty instances, and distoma crassum in one. The blood of 100 typical cases of beri-beri was examined without the discovery of any micro-organism, except in one case, where the parasite was of the filaria type. The blood discs were found to be pale and few in number. Mr. Sinclair mentions that he inadvertently inoculated himself on one occasion, with the result that some symptoms resembling those of an early stage of beri-beri followed, but they passed away in about a week. The author of these "Notes" agrees with other observers in considering beri-beri a contagious disease induced by some micro-organism. Brief analyses of several cases of beri-beri are given, and in reference to them Mr. Sinclair remarks that the gait was well marked in all those patients who could walk. Albumen was not present in the urine, which was in a number of cases strongly acid. Malarial cachexia was evident in all the cases. Anthelmintics were useful where internal parasites were suspected, and tonics of iron and strychnia were beneficially employed.

THE LANCET.

LONDON: SATURDAY, DECEMBER 26, 1891.

THE ANNUS MEDICUS 1891.

THE year 1891 is wellnigh over, and, in a medical sense, will be memorable. It began with an unusually prolonged frost, and the summer of it has been conspicuous by the absence of sun, the excess of rain, and the prevalence of storms of great severity, continued into the winter. In some low-lying and ill-drained counties the earth has been so submerged that fears of a considerable revival of ague exist. Medical men have been in unwonted demand during its course in consequence of an extensive and serious epidemic of influenza, which is still asserting itself unpleasantly in different parts of the kingdom, of which we shall have more to say presently. The year will be memorable as that of the decennial census, which showed a marked decline in the rate of increase of population in our large towns during the intercensal period, requiring a correction in the estimate of their population of nearly three-quarters of a million, a percentage of error of no less than 6·6 per cent. The decline of increase is largely or entirely due to a persistent decline in the birth-rate, and this in its turn to a marked depression of the marriage-rate during the same period. The marriage-rate in 1873 reached its maximum, 17·6 per 1000. In the last decennium it has fallen to 14·9, very considerably lower than in any previous ten years. True to our principle of brief introductions, we shall at once go to our history under its respective headings.

Biology.

The energies and work of biological inquirers are apt to be directed in certain channels, and this has been strikingly exemplified by the publications of the last year or two, which have been so largely devoted to the investigation of micro-organisms—their form, cultivation, and action on the economy. This kind of work has been continued during the past year in the papers of ZAUFAL and MOOS on the Relations of Micro-organisms to Inflammations of the Middle Ear, of CUNNINGHAM on Various Species of Choleraic Comma Bacilli occurring in Calcutta, and of TIZZONI and CATTANI on the Resistance of the Bacilli of Tetanus to Chemical and Physical Agents. But, on the whole, the labours of the younger observers, of whom a host might be mentioned, have been directed to the examination of the effects produced by the injection of KOCH'S fluid in the treatment of tuberculosis, and of the means of securing immunity from diphtheria and other diseases.

The principal works that have been published in Physiology during the past year are the carefully written and instructive treatise on Human Physiology by Professor WALLER, whose large practical experience and powers of accurate observation have enabled him to produce a book of considerable originality and thorough reliability. Professor FOSTER has brought the fifth edition of his Physiology to a close by the issue of the fourth part, devoted to the consideration of the senses. This treatise has no rival in the lucidity of its style, the judicial character of its treatment of conflicting views and statements and for its grasp of the general bearings of physiological facts on medicine. It is well adapted for the advanced student and for those who, having left the schools and entered practice, wish to acquire or retain a general survey of physiology and of such knowledge as may be useful in the practice of medicine. Bibliographical references are, however, conspicuous by their absence. A new and revised edition of the encyclopædic work of LANDOIS and STIRLING has also been published, and this now constitutes perhaps the most complete treatise on physiology that has as yet appeared. It has been thoroughly worked up to date; and scarcely any fact, however minute, that has been published in the interval between the issue of the last and previous editions has been passed over unnoticed or has not been duly collated with similar facts in former editions. Other smaller but handy volumes are the Manual for the Physiological Laboratory, by Dr. HARRIS and Mr. D'ARCY POWER, and Human Physiology, by Mr. POWER, in CASSELL'S series of text-books. HAMMARSTEN has published a work on Physiological Chemistry. Dr. ALFRED RUSSEL WALLACE has issued a volume on Natural Selection and Tropical Nature, which though in part reprints of his well-known contributions to the theory of Natural Selection which appeared twenty years ago, and of his essays on Tropical Nature which were published about twelve years ago, are enriched with the results of his more mature knowledge and reflection. The volume is full of the most interesting observations, and the reasoning Dr. WALLACE founds upon them is as entertaining and original as the facts themselves. Amongst the most striking chapters are those on the philosophy of birds' nests, the development of the human races, animal life in the tropical forests, humming birds, and the colours of plants and animals. The volume is worthy of a place beside those of DARWIN, who acknowledges in many places his indebtedness to the author both for his facts and his opinions. The volume on the Anatomy of Birds by HANS GADOW and EMIL SELENKA in BRONN'S Classes and Orders of the Animal Kingdom has at length, after more than twenty years' slow publication in parts, been finished. It is full and complete, and beautifully illustrated; but an apology is made in the preface for the defects of the earlier, as compared with the later, portions of the work. Professor FLOWER has collected the contributions he made to the Encyclopædia Britannica during its publication; these, with some additions by Mr. LYDDEKER, constitute a well-illustrated volume, entitled "Mammals, Living and Extinct," and is an authoritative exposition of our present knowledge of this important class. Messrs. ELLENBERGER and BAUM have written the Anatomy of the Dog, one of those exhaustive monographs which the Germans do so well, and which it is surprising, considering the frequency with which experiments on dogs are performed on the Continent, has not been done before; and Professor A. MILNES MARSHALL has published a fourth edition of his very useful monograph on the Frog, the dissection of which animal should be carefully executed by every biological student with Mr. MARSHALL'S book at his side. Mr. B. THOMPSON LOWNE has published the second part of

his exhaustive treatise on the Blowfly. The large and well-illustrated work of TESTUT on Human Anatomy has been completed; and a treatise, which has hardly received the notice in this country that it deserves, the Outlines of Psychological Physiology, by Professor G. T. LADD of Philadelphia, has reached its second edition. Several small treatises on Biology intended for students have been published, amongst which the Lessons in Elementary Biology, by Mr. T. JEFFERY PARKER, may be particularly mentioned on account of the broad and liberal manner in which the subject is treated, and the Zoology Notes, by Mr. ALEXANDER JOHNSTONE. Valuable accessions to our knowledge of anatomy may be expected from the Reports of the Committee of Collective Investigation of the Anatomical Society of Great Britain and Ireland published under the superintendence of Mr. ARTHUR THOMSON of Oxford. The report of the present year, which is the second that has been published, deals with the mode of origin of the thyroid axis and its branches, the mode of distribution of the last dorsal and first lumbar nerves, the distance in different subjects of the lower margin of the kidney on each side from the iliac crest, the frequency of the occurrence of a diverticulum ilei, and other practical points, and includes the results of observations made at no less than twenty schools and colleges. Such collective investigations, if accurately continued for several years, are certain to bring important accessions to science. Some very important observations consecutive upon the late Dr. WOOLDRIDGE'S investigations on the action of tissue fibrinogens have been made by Dr. A. E. WRIGHT, and may prove of remedial value, since by the injection of such tissue fibrinogens local coagulation of blood can be promptly effected. In regard to digestion, Professors CHITTENDEN and HARTWELL have shown that in the digestion of the proteids three successive stages may be followed, these bodies being converted first into syntonin, then into primary albumoses or proteoses, then into deutero-proteoses, and finally into peptones; and in a separate investigation Professor CHITTENDEN has demonstrated that gelatine undergoes changes of a very similar nature. Mr. HORTON SMITH has studied the changes which occur in peptonised milk with much care and assiduity, and with good results. MM. ARTHUS and PAGÉS have made an important series of researches on the action of rennet on milk and on the coagulation of casein, and have been led to advance a chemical theory of the coagulation of the blood, which they consider to be a closely analogous process to that of casein. They hold that casein is homologous with fibrinogen, cheese with fibrin, and the soluble globulin substance of the whey with the serum globulin of HAMMARSTEN that coagulates at a temperature of 64° C. The changes produced in casein by the action of pancreatic and rennet extracts have also been the subject of an extended research by Dr. SYDNEY EDKINS, which has led him to the conviction that there is a ferment in pancreatic extracts which has a peculiar action on casein. The circumstance that two alkaline fluids, the bile and the pancreatic juice, act on the acid chyme immediately after its escape from the stomach has long been enigmatical, but Dr. RACHFORD, by a series of experiments made in the Physiological Laboratory of Berlin, has demonstrated that, as might almost have been anticipated on the doctrine of evolution, the addition of bile to pancreatic juice which is acting in the presence of hydrochloric acid greatly hastens and facilitates the fat-splitting action of the juice—in other words, that the normal conditions are precisely those which are most advantageous for the due and effective performance of the digestive process. HEUBNER has shown that lactic acid and certain volatile acids are invariably present in the stomach of infants at the breast, though often only in small quantity. A long and useful examination of peptonised milk by Mr. HORTON SMITH has led him to the conclusion that the preparations sold under the name of peptonised foods consist for the most part of albumoses, and that they are wholesome and serviceable foods. Professor CHITTENDEN'S experiments support the view that alcohol, when taken in moderate quantities, acts in the main as a non-nitrogenous food, in this respect conserving the tissues, and at the same time having some specific action upon nutrition, which is manifested by its tendency to increase the excretion of uric acid. The experiments of BOWDITCH have satisfactorily demonstrated the inexhaustibility of the motor nerves in the frog, and perhaps, as LANGENDORFF has suggested, the almost indefinite persistence of the pain of toothache shows that in man the sensory nerves will bear protracted stimulation without exhaustion. A valuable set of twelve lectures on the structure of the nervous system has been published by EDINGER, giving a good *résumé* of the present state of our knowledge on this difficult subject, and an accurate translation by Messrs. VITTIM and RIGGS places the work in good form before the English reader. From GAD and HEYMAN'S researches it appears that myelin is either lecithin itself or lecithin in loose chemical combination. Messrs. BEEVOR and HORSLEY'S experiments on the orang-outang have shown that the motor centres in this animal are very similar in position to those of the macacus sinicus, the majority lying in the immediate vicinity of the sulcus of Rolando and being very sharply defined for different groups of muscles. The observations of Dr. HALE WHITE on cerebral heat-centres show that the temperature of the body in the rabbit rises after lesions of the corpus striatum and crus cerebri with much constancy, less regularly after lesions of the upper surface of the cerebrum, and not at all after lesions of the cerebellum. The origin and distribution of the nerves supplying the arrectores pili, or pilomotor nerves, have been made out with care by Messrs. LANGLEY and SHERRINGTON. The important circumstance, from a clinical point of view, as to whether the urine normally contains a trace of albumen, has been answered in the negative by WINTERNITZ, though he admits, with LEUBE, POSNER, and SENATOR, that it may be present within physiological limits to as large an extent as 0·4 per 1000. An elaborate series of experiments undertaken by ARAKI on dogs, rabbits, and birds have shown that with a good and sufficient supply of food, respiration of an atmosphere containing less than the normal quantity of oxygen leads to the elimination by the urine of lactic acid, glucose, and albumen. A valuable accession to the subject of development has been made by KORSCHELT and HEIDER in the shape of a treatise devoted exclusively to the history of the develop-

ment of the invertebrata, giving in very readable German all the advances that have been made, which are both numerous and important since the appearance of BALFOUR'S classical work. It is well illustrated. An interesting case of persistent "Canal of His," carefully dissected by Dr. C. F. MARSHALL, has enabled that gentleman to demonstrate that in all probability this canal is the remnant of one of the bifurcations of the median thyroid rudiment, the other bifurcation forming the pyramidal lobe of the thyroid gland.

Pathology.

The year 1890 closed with the development of a remarkable chapter in the history of pathology in its bearings on the treatment of disease, and for a few months reports flowed in from all quarters of the globe respecting the alleged curative properties of the substance extracted by Professor R. KOCH from cultures of the bacillus tuberculosis in all forms of that disorder. Almost as suddenly as it was taken up was this latest remedy for one of the most prevalent of human scourges allowed to drop, with, on many sides, expressions of disappointment, rendered all the keener by the eagerness with which it was first accepted. But the principle underlying the method thus prematurely introduced remains unshaken, for it is one which has been applied and is being pursued with regard to other diseases of known bacterial origin. In regard to tuberculin itself, some notable progress has been made in our knowledge of its constituents through the labours of WATSON CHEYNE, HUNTER, CROOKSHANK, KLEBS, and others, and, however disappointing its therapeutical employment may have been (owing in no small measure to irrational use), the fact that it contains elements capable of selecting tuberculous tissue and hastening its disintegration has hardly been gainsaid. This property, indeed, is admitted by those who, like VIRCHOW, have shown that, on pathological grounds, its employment may tend to a wider dissemination of disease within the body. We have alluded to this subject at the outset of this brief survey of the pathological progress of the year because, if there is one matter more than another which is absorbing attention, it is that of immunity in infective disease and the methods for artificially securing it. Experimentalists have been most assiduous in studying the changes in the blood induced by the growth of pathogenic organisms, and in more than one disease it has been found that the serum of inoculated animals contains substances which, when introduced into another animal, can confer immunity from that infection. The poison of tetanus has thus been investigated by TIZZONI and CATTANI, VAILLARD and VINCENT, by KITASATO and many others; that of rabies by TIZZONI; and that of pneumonia—now more than ever recognised to belong to the infective class—by VASSALE and MONTANARI, FOA and CARBONE, and, chief of all, by G. and F. KLEMPERER, who declare that the blood-serum of affected animals contains two substances, mutually antagonistic, which they term "pneumotoxine" and "anti-pneumotoxine," the latter being found in the serum as soon as the effects of the fever are passed off. Their conclusions, which have been skilfully applied to explain the most striking of the phenomena of acute pneumonia—viz., the crisis—are in harmony with the researches of BRIEGER, KITASATO, FRAENKEL, and others with regard to bacterial poisons in general, and the nature of diphtheria and tetanus in particular, and open up a wide field for inquiry and speculation. It may be recalled in the latter regard how Dr. ALTHAUS has, in his recent exposition of the nature of influenza, theorised about this affection in the light of these researches. Still, it has yet to be proved that influenza is a microbic malady, although the contention of Dr. ALTHAUS that its poison acts especially on the nerve centres is to a certain extent borne out by the discovery by FOA of hæmorrhagic foci in tracts of the spinal cord in this disease.

The subject of the parasites of the blood, and especially those organisms that have been found in relationship with the red corpuscles in malarial fevers, has been studied by LAVERAN, CELLI, MARCHIAFAVA, and SIMPLICE. Phagocytosis—which may be said to divide the attention of pathologists with the question of immunity—has been fully investigated anew by METCHNIKOFF, by Dr. ARMAND RUFFER, and DANILEWSKY, and it was discussed in a critical spirit by Dr. BURDON-SANDERSON in his recent Croonian lectures, which surveyed the remarkable progress made of late years in the region of the pathology of infective disease. Of the researches of bacteriologists into such subjects as typhoid fever, tuberculosis, actinomycosis, diphtheria, anthrax, and yellow fever (to mention only a few), it would be impossible here to speak. It must suffice to say that the year has seen fresh and convincing evidence of the part played by micro-organisms in disease, and the acquisition of greater knowledge of the nature of the microbes and the conditions under which they flourish. Mr. WATSON CHEYNE continued before the Royal College of Surgeons his exhaustive description of the intimate processes of articular and osseous tubercle; and in his Lettsomian lectures Dr. STEPHEN MACKENZIE gave a lucid account of the pathology of anæmia. Amongst diseases the pathology or anatomy of which has received special attention may be cited the curious affection known as acromegaly, attributed by MARIE to change in the pituitary body, which he says is invariably present, and for which he holds a theory analogous to that expressed in regard to the relation between the thyroid body and myxœdema; diabetes in relation to pancreatic disease, studied by LÉPINE and others; Addison's disease, of which Drs. DIXON MANN and BYROM BRAMWELL in this country have given fresh descriptions; general paralysis of the insane, by MEYER and MENDEL; lead poisoning, in respect of the degenerations it produces in acute cases, by Dr. COEN of Bologna and in respect of its general pathology by Dr. THOS. OLIVER in his Gulstonian lectures. The subject of carcinoma, both in its histological and etiological aspects, continues to receive much attention; whilst the finer cell changes in new growths, and the process of coagulation necrosis, have been further elucidated by WRIGHT and HAUSEMANN. The occasion of the celebration of the seventieth birthday of Prof. VIRCHOW, the founder of modern pathology, was characterised by the production of many original contributions to science, to which it is not possible to allude in detail. This is the less necessary as we have quite recently given a *précis* of the chief of the "Festschriften" produced in honour of this illustrious pathologist.

Therapeutics.

The therapeutic work of the past year has naturally been largely influenced by the increased attention attracted to the treatment of phthisis, as the inevitable outcome of the hopeful statements made when the question of KOCH'S treatment was first brought into prominence. A very large section of the therapeutic literature of the early part of the year was devoted to reports of this treatment in the hands of numerous workers. These reports have gradually become less sanguine, and at the present time it may be doubted whether anyone would advocate this form of treatment in any but the slightest and most doubtful cases of pulmonary phthisis, although its efficacy as a diagnostic agent in many other forms of tuberculosis is still maintained. Following closely upon KOCH'S treatment came the suggestion of the employment of cantharidinate of potassium or sodium, of which OSCAR LIEBREICH speaks in high terms. The hypodermic use of guaiacol and iodoform has also found advocates, while others vaunt the hypodermic injection of aristol, and the treatment by compressed medicated air. An important paper has been written by Dr. THEODORE WILLIAMS upon the treatment of the pyrexia of phthisis; in this he gave a long list of the various remedies he had essayed, and incidentally referred to bad symptoms of collapse which had followed the use of guaiacol in one case; he is in favour of treating this form of pyrexia by derivative measures, such as counter-irritation, salines, and expectorants, while he considers that the use of medicines solely directed to lowering the temperature without promoting increase in the natural secretions is generally unadvisable. The night sweats of phthisis have been combated by sulphonal and tellurate of sodium, and for the early treatment of phthisis the use of hypophosphites has been revived, together with the employment of respirators charged with iodoform and eucalyptus oil. The protective and curative influence of helenine on tuberculosis has been studied experimentally, and, although clinical experience is wanting, the results are apparently hopeful. As expectorants in the treatment of chronic bronchitis apomorphine and apocodine have been recommended, the relatively large dose of the former, which can be given by the mouth without producing vomiting, being noteworthy. Acetanilide has been recommended in the treatment of acute and chronic bronchitis, while PETRESCO speaks very highly of the value of large doses of digitalis in pneumonia. A summary of an important paper by NOTHNAGEL upon the treatment of hæmoptysis appeared in our columns; he laid stress upon the value of rest and diet, together with morphine to allay cough, and gave reasons for avoiding the use of tannic acid, alum, or astringent preparations of iron, while he doubted the value of applications of ice, which might promote cough. In the course of some lectures upon anæmia, Dr. STEPHEN MACKENZIE laid stress upon the value of arsenic as a hæmogenetic remedy, mentioning under the same heading iron, phosphorus, manganese, oxygen, and hydrochloric acid. Ferric bromide has been advocated to soothe without depressing, and to strengthen without exciting. Venesection has once more come under discussion, and the general idea appears to be that it might be practised more often with advantage. The use of electricity and of belladonna in tachycardia or rapid heart has found a certain amount of favour. As opposed to the usual idea of its cardiac depressant action, quinine has been recommended as a cardiac stimulant. In his Lumleian lectures, Dr. BROADBENT spoke favourably of strophanthus, citrate of caffeine, and sulphate of spartein, but all of these he placed in the second rank compared with digitalis. For the treatment of gall-stones, of affections of the bile-ducts, and of hepatic diseases generally, olive oil, turpentine, calomel, and chloride of ammonium have been advocated. Hydrochlorate of orexin has been further studied, and is praised for its power of stimulating the absorption of the products of digestion, while an important paper has appeared upon the action of some recent hypnotics on digestion. Tartar emetic has been recommended for intestinal catarrh, and Dr. B. W. RICHARDSON has written upon the value of saline transfusion in cholera, hæmorrhage, and chloroform collapse. Dr. VALENTINI advocates the treatment of typhoid fever by very large quantities of liquids; the same disease has been treated with liquor sodæ chlorinatæ, and the mortality and the relative occurrence of serious complications under the cold bath treatment have also been once more studied. Further investigations with diuretin have given satisfactory results, and experiments have been made upon the diuretic action of fresh thyroid juice. Hæmatochyluria has been treated with bichromate of potash, and the beneficial influence of turpentine in cases of renal calculi has been noted. Puerperal eclampsia has been treated with antipyrin with a view of reducing arterial tension. Very little has been written upon the medicinal treatment of diseases connected with the nervous system, but hypodermic injections of carbolic acid have been used for tetanus, and ethylene bromide and borax have been recommended for epilepsy, the latter being stated to be of the greatest use when epilepsy is associated with gross organic disease, such as hemiplegia and athetosis. Syphilis, especially of the nervous system, has been treated by the subcutaneous injection of perchloride of mercury; while the use of methyl-violet or pyoktanin has been investigated by many observers. In the treatment of gonorrhœa and of ulcers this substance is said to be useful, but by no means unfailing or devoid of irritation in its action. For diphtheria numerous remedies have been advocated, the principal being perchloride of mercury, chlorine, cyanide of mercury, thymol, hydrochloric acid, and salicylic acid. Pertussis has been treated with naphthalin, bromoform, and ouabaine. The use of antiseptics has given rise to a great deal of correspondence, which has been characterised by the vehemence to which this subject always appears to give rise. Some new antiseptics of the aromatic series have been examined, notably sozoiodol, and Professor STILLING of Strassburg has written upon the value of aniline dyes as antiseptics; he commends methyl-violet for its efficacy, its power of diffusion, and its non-poisonous properties. The rush for antipyretics appears to be abating, but a few have been recommended during the past year. Hydrochlorate of phenocoll is stated to have given excellent results in phthisis and in cases of rheumatic fever which had resisted the action of antipyrin, salicylates, phenacetin, and antifebrin. Iodine compounds of antipyretics have been inves-

tigated by MÜNZER, and euphorine or phenyl-urethan has been recommended as being antipyretic, antiseptic, antirheumatic, and analgesic. Very few new hypnotics have been introduced as candidates for favour, and even these have been mainly new combinations of older remedies, such as uralium or chloral urethane and hypnal, a compound of chloral hydrate and antipyrin. Of these two the former has received very qualified praise, as it has caused vertigo, while hypnal, although it has the advantage of being tasteless and less depressing than chloral, has in some cases caused increased restlessness instead of sleep. The position of the older hypnotics has been restudied, a careful report having been issued by the Therapeutic Committee of the British Medical Association. With regard to sulphonal, BRESSLAUER has pointed out that five deaths have occurred after its use, the cause of death in all being heart failure, with œdema of the lungs. Valuable papers have appeared upon the action of thebaine, narcotine, and certain of their derivatives, and upon chloralamide; duboisin has been recommended as a sedative and hypnotic; and, on the other hand, an extremely interesting protest has been made against the abuse of hypnotics in cases of insanity. One of the most curious and unexpected contributions to the study of anæsthetics has been the paper published in our columns by Dr. GEORGE JOHNSON on the Anæsthetic Action of Pure Nitrogen. The relative value of the different general anæsthetics gave rise to much discussion at the British Medical Association meeting at Bournemouth, and the question has been revived from time to time in our correspondence columns. A sad subject for speculation is offered by the large number of deaths under chloroform which have been recorded during the past year. It is possible that the increase may be apparent rather than real, since in all probability every case which occurs is now carefully noted, instead of being somewhat hidden away as in former times. Still, the list is appalling in its length. The suggestion to employ strychnine as a prophylactic before the administration of chloroform is too new for definite estimation of its value. Chloride of methyl and chloride of ethyl have been praised as local anæsthetics, and methylene blue has been recommended as an anodyne in rheumatic and neurotic conditions. Valuable papers have been contributed by Surgeon PARKE and Mr. E. M. HOLMES upon the Arrow Poison of the Pigmies, by Professor CHARTERIS upon the Physiological Action of Paracresotic Acid, and by VON ESMARCH upon Practical Disinfection. Professor FRASER has published a most scholarly and elaborate paper upon Strophanthus Hispidus, a drug with which his name must always be associated. A notice of the main therapeutic work of the year would be incomplete without a passing reference to the increasing interest which is being devoted to hypnotism in the treatment of disease, and to the curious experiments which are still being made with music as a therapeutic agent. While the above indicates that in every branch of medicine therapeutic progress is being made, it remains as a healthy sign of the times that attention to hypnotics and antipyretics is on the wane, and that, although no very striking new remedies have been introduced, our knowledge of the powers and properties of many older drugs has been rendered more precise.

Surgery.

The last twenty years have witnessed the greatest revolution in the practice of surgery of which there is any record. Not only has the mortality of surgical operations been reduced to a point never dreamt of by the last generation of surgeons, but the area of surgical interference has been enormously extended. In the earlier years of this period the developments of the surgical art were so rapid and marked that in each annual survey several had to be recorded. But now this wave of progress has largely spent itself, or reached its full height. The battle of antiseptic surgery has been fought and won, and there are now very few, if any, regions of the body not the field of successful surgical procedures. We should be sorry to imply that we have attained to anything like finality in surgery; what we have done is to reach to a point of great perfection in the technique of aseptic surgical operations, and of very general application of surgical procedure for gross pathological lesion in any part of the body. What we are witnessing now is a lateral extension of good surgery—its practice by an ever-increasing proportion of the profession. The dirty scalpel is practically extinct, and the wet and septic poultice is almost as rare as the dodo. The most careful antiseptic measures are now taken by surgeons all over the country who have been at pains to become fully acquainted with the details and results of LISTER'S work. The treatment has been considerably simplified, and this was a necessary preliminary to its general adoption. This is a most noteworthy feature of the surgical progress during the past year, and we may confidently expect to see greater advance in this way in the future. In the matter of the area of surgical interference two points may be mentioned, both included in the surgery of the abdomen. They are the advance of hepatic surgery and the recession of the surgery of the vermiform appendix. The writings of Mr. MAYO ROBSON and Mr. KNOWSLEY THORNTON, although recording experiences gained in previous years, have given a great impetus to the surgery of the gall-bladder and ducts. Cholecystotomy, thanks mainly to the work of Mr. LAWSON TAIT, has for some few years been a well-recognised procedure, and in cases of distended gall-bladder from impaction of a calculus in the cystic duct the success has been very great. But from this, surgeons have advanced to the treatment of more difficult cases, to the removal of gall-stones from small or even contracted gall-bladders and from the common bile-duct. These cases are attended with special difficulties. Not the least of these is that of diagnosis; and when this has been overcome, the surgeon's task is only begun. The parts are often found to be so embedded in, or matted together by, adhesions that great care is necessary to avoid injury of the important structures in the neighbourhood of the common duct. The depth at which the stone may lie in the duct and the unyielding nature of the liver constitute special difficulties when an attempt is made to close a wound in the duct by sutures. In many of these cases the surgeon is in doubt whether to close the wound in the duct or to drain it, or to remove the gall-bladder and cystic duct, and further experience is required to enable operators to formulate rules on this matter. The immediate closure of the wound by suture is the ideal procedure, and, when it can be safely carried out, should be employed. There will

probably always be some cases where the attempt to do this will be attended with great risk of failure, and here drainage offers the best chance of success. Excision of the gall-bladder seems to be indicated where the manipulations necessary for the removal of gall-stones have inflicted irreparable injury upon it. Papers read at the Clinical Society by Mr. ANDREW CLARK and Mr. BLAND SUTTON on Cases of Excision of the Vermiform Appendix for Perityphlitis gave rise to an important discussion, in which opinions were expressed in strong opposition to the indiscriminate removal of the appendix, which appears to have been carried out by some surgeons. There are cases in which the appendix ought to be excised, as, for instance, when it is gangrenous. There are many more where careful opening, cleansing, and draining of an abscess around a diseased or perforated appendix is the proper course to pursue, but there is no occasion to operate at all in the majority of cases of typhlitis; and certainly recovery from such an attack is not the justification of removal of the appendix, lest another and worse attack follow. At the early part of this year all eyes were turned to Berlin, the seat of the earliest and most extensive experiments with KOCH'S tuberculin. For some time great hopes were entertained of it in surgical tuberculosis. Further experience, however, has not justified these bright anticipations. For lupus the remedy as now prepared is extremely useful, although other means often have to be adopted for completing the treatment. But in diseases of bones and joints the remedy has not proved the success it was announced to be, and there seems reason to fear that, except with regard to lupus, tuberculin will play but an insignificant part in surgical therapeutics.

Obstetrics and Gynæcology.

In this country during the past year the workers in this double department of the profession have shown considerable activity, as manifested by the numerous papers read before the Societies giving the results of their experience, and by the many important questions submitted from time to time for discussion. In the Obstetrical Society of London early in the year Dr. PLAYFAIR read a paper on the Removal of the Uterine Appendages in cases of Functional Neuroses. In the discussion on this subject Sir SPENCER WELLS spoke very strongly on the unnecessary and unjustifiable mutilation which has often taken place for such transitory diseases. Dr. WATT BLACK, in his introductory address as president, dealt with the subject of Puerperal Fever. Dr. HERBERT SPENCER contributed an interesting account on Visceral Hæmorrhages in Still-born Children, relating the result of 150 post-mortem examinations. Dr. HERMAN submitted a further report on his continued investigation on the question of Puerperal Eclampsia, especially in relation to the temperature and the state of the urine. Dr. JOHN PHILLIPS read a paper on the Influence of Purpura Hæmorrhagica upon Menstruation and Pregnancy. Mr. F. J. MCCANN, in a communication on Chorea Gravidarum, gave the details of six cases. In the Medical Society of London, Dr. WILLIAM DUNCAN gave an address on Chronic Disease of the Uterine Appendages with thirty consecutive cases treated by abdominal section This address caused considerable discussion not only in the Society, but in the columns of THE LANCET, owing to a joint letter of Drs. JOHN WILLIAMS and CHAMPNEYS, in which they stated that "this wholesale resort to a mutilating operation calls for serious consideration by the profession." At the British Gynæcological Society many interesting papers were read. Mr. LAWSON TAIT communicated the details of a case of double pyosalpinx, which led to a considerable amount of difference of opinion. A discussion took place on "ovulation," during which many extraordinary statements were made. Dr. GRIGG intimated that he had found that more than 25 per cent. of female infants menstruated during the first ten days after birth. Ectopic Gestation and the variety Tubal Pregnancy, Secondary Hæmorrhage, and Diseases of the Uterine Appendages were some of the subjects discussed at the ordinary meetings of the Society, the last subject occupying three evenings. A departure from the ordinary arrangement of the Society took place in June, when a provincial meeting was held at Newcastle under the presidency of Dr. ROBERT BARNES, and discussions took place on the following subjects: Surgery of the Uterine Adnexa, Puerperal Septicæmia, Vaginal Hysterectomy, and the Diagnosis of some Tumours. Among the papers was one on Hypnotism in Hysteria by Dr. DRAPER. Early in the session of the Edinburgh Obstetrical Society its president (Dr. BERRY HART) read a very important paper on the Anatomy and Mechanism of Early Abortion, which might be regarded as the first endeavour to study abortion by the method of sectional anatomy. In another paper by the same author on Displacement of the Placenta in Extra-uterine Gestation, and its relation to those cases ending in Pelvic Abscess, he explains such cases as beginning in the Fallopian tube and developing into the broad ligament. Dr. CHARLES E. UNDERHILL related three cases of Rupture of the Uterus, and exhibited one which was successfully treated by laparotomy. Dr. HALLIDAY CROOM offered a criticism of some of the Lesser Gynæcological Manipulations. A communication from Dr. ENGELMANN of Kreuznach, on the Treatment of Fibroid Tumours of the Uterus, was made, in which 409 cases were carefully tabulated in regard to treatment by baths, by ergotin, or by electrolysis. The younger Scotch Society—the Glasgow Obstetrical and Gynæcological—has shown some good work during the year; and we have especially to congratulate one of its Fellows, Dr. MURDOCH CAMERON, on his success in Cæsarean section. The new North of England Obstetrical and Gynæcological Society, under its distinguished president, Dr. JAMES BRAITHWAITE, discussed during the year subjects similar to those brought forward at the London Societies. We have to note the death of two prominent members of the profession whose devotion to this department warrants us in recording here the loss sustained by their removal. The first was Dr. FORDYCE BARKER of New York, whose work on Puerperal Diseases is well known; his abilities received recognition by his brethren on this side of the Atlantic, and we believe that he greatly valued the honorary degree conferred on him by the University of Edinburgh. The other, Dr. JAMES HENRY BENNET, was brought prominently before a former generation by his work on Uterine and Ovarian Inflammation, but more recently he was known by his writings on the treatment of pulmonary phthisis.

Ophthalmology.

Three men well known for their sound knowledge of the diseases of the eye have passed away—Mr. MIDDLEMORE, a representative of the older school of surgery, whose treatise on the Diseases of the Eye and its Appendages, published in 1835, constituted one of the standard works of that period; M. WARLOMONT, long the editor-in-chief of the *Annales d'Oculistiques*, and who at an advanced age kept himself well abreast with modern methods of research; and M. BECKER, the accomplished ophthalmologist of Heidelberg. A brief but charmingly written obituary notice of Professor DONDERS, from the hand, we presume, of his friend, Sir WILLIAM BOWMAN, appears in the Proceedings of the Royal Society, of which the late Prof. DONDERS was a Corresponding Fellow. The most important treatise that has appeared in the course of the year in the department of ophthalmology is undoubtedly the Entstehung der Entzundung (or Origin of Inflammation) of Dr. THEODOR LEBER, the successor of BECKER in the post of Professor of Ophthalmology in the University of Heidelberg. This work contains the results of eleven years' hard work, and describes with great minuteness of detail the phenomena of inflammation as they appear in the cornea of various animals when excited by the injection of the spores of penicillium glaucum, aspergillus niger, staphylococcus, and many other substances, into the tissue of the cornea and into the anterior chamber. It is well illustrated, and has been fully noticed in our columns. Mr. MACNAMARA has published a new edition of his very well written manual, in which he has had the advantage of Mr. HARTRIDGE'S assistance as a coadjutor who has written that portion which deals with the refraction of the eye and has brought it up to the present date. Mr. HARTRIDGE has also published a separate work on the ophthalmoscope, in which the use of the instrument is given with exceptional clearness. No better guide could be desired by the student. SCHMIDT-RIMPLER has published the fifth edition of his work on Diseases of the Eye and Ophthalmology. New plates have been added, and the language he employs is very clear and intelligible. Colour-blindness was not only a subject of discussion at one of the meetings of the British Medical Association, but has been fully treated by Dr. EDRIDGE GREEN in one of the volumes of the International Science Series, and no doubt can be entertained that tests considerably more stringent than those now employed should be adopted if the safety of the public is to be properly consulted. Mr. S. PERCIVAL has done an excellent piece of work in rendering much more definite our knowledge of the indications for the employment of prisms and of the precise power of the glass required to correct defects of the recti muscles, whether these defects are of the nature of paresis or of spasm. The injection of KOCH'S fluid in the treatment of various diseases of the eye has been experimentally investigated by several practitioners. Thus KÖNIGSHÖFER and MASCHKE state that they have observed improvement follow the injection in cases of recurrent iritis, vitreous troubles, and chorio-retinitis, whilst it was of no service in simple iritis. GEPNER, WAGNER, and COHN observed improvement after the injection in cases of conjunctival lupus and of phlyctenular conjunctivitis, and keratitis. ABRAND records the curative effects of its employment in a case of conjunctival tuberculosis, and UHTHOFF found it beneficial in scrofulous affections, but the cases observed have been too few in number, and the time allowed for the treatment appears in most cases to be too short, to prove that the effects produced are permanent. The arrest of inflammatory processes in the conjunctiva and cornea and in the interior of the eye has been effected by MM. ABADIE and DARIEN by practising the intra-ocular injection of weak solutions of corrosive sublimate. It is necessary of course that when this proceeding is practised the utmost care in cleansing the instrument should be used. The benefits of massage in various affections have naturally led to its adoption by M. MALGAT and others in diseases of the eye. From the reports that have appeared of cases treated in this way considerable improvement seems to have resulted in cases of nebula and leucoma when the opacity is not too dense, from the systematic rubbing in of lanolin and mercury. The nutrition of the lens has been the subject of experimental study by H. MAGNUS, who endeavours to show that cataract is the result of a disturbance of the normal nutritive processes occasioned partly by faulty circulation and partly by faulty condition of the fluids circulating through the chambers of the eye. The practice of operating for cataract without iridectomy seems to be more generally adopted, and good results have been obtained by several experienced operators. At the meeting of the British Medical Association Mr. MACNAMARA, the President of the Ophthalmological Section, expressed himself in favour of the removal of immature senile cataracts. M. DE WECKER has drawn attention to a special form of inflammation of the iris which he believes to be due to septic infection proceeding from the uterus, and for which he proposes the name of "metritic iritis." The changes occurring in the eye after section of the optic nerve in front of and behind the entrance of the retinal vessels have been the subject of an experimental inquiry by WAGENMANN.

Dental Surgery.

But little has been published this year upon the operation of "implantation"—that is, drilling an artificial socket in the alveolus and inserting a tooth therein,—except some experiments on animals and observations on human patients, a mineral tooth being used in place of a natural one, without, however, satisfactory results; in fact, the operation, never favourably received in this country, has now fewer advocates than ever. As a modification of porcelain inlays in place of gold in conspicuous positions, glass inlays have been introduced by Herr HERBST of Bremen, and were successfully demonstrated at the last meeting of the British Dental Association by Mr. WEISS. White fillings (oxyphosphates or oxychlorides) being generally of evanescent character, gold stoppings in front teeth offensive to the eye, and amalgams objectionable from their tendency to turn the tooth blue, it has been suggested to mix amalgam with oxyphosphates, but whether this is a desirable combination there has not been experience enough to determine. In the mechanical department perhaps the most notable event is a method of retaining in place artificial teeth in edentulous cases by means of pegs of gold wire fitting loosely into holes drilled into the alveolus, introduced by Mr. DALL of Glasgow, to which we referred some months ago, and it would seem, from independent

testimony, to have given satisfactory results as far as can be judged from the small number of cases recorded. A material known as "continuous gum," which is an enamel of great value where artificial gum is conspicuous in the mouth, but heretofore little used on account of its high point of fusibility, was recently demonstrated by Messrs. CUNNINGHAM and ROSE respectively to have been brought within the range of the practical. As a local anæsthetic chloride of ethyl has gained a certain amount of popularity, and can be obtained at the dental depôts in glass tubes containing sufficient for one or two cases, no spray apparatus being required. Cocaine used as an injection for tooth extraction is said to be more efficacious if a small quantity of carbolic acid be added, which, it is claimed, not only renders the solution more stable, but increases its anæsthetic action; indeed, carbolic acid in a 5 per cent. solution of water by itself is said to be superior to cocaine. Of general anæsthetics with reference to dental operations there has not been much that is new during the current year, except the scientific and practical experiments of Dr. SILK with bromide of ethyl, which were embodied in a paper read before the Odontological Society. Mr. HOWARD MUMMERY read a paper before the Royal Society with the purpose of showing that the appearances in dentine suggest that it is formed by a connective tissue calcification, and that the process is more closely analogous to the formation of bone than has usually been supposed. Mr. H. SEWILL, following in the footsteps of other investigators, claims to have produced artificial caries the microscopical appearances of which are identical with those of caries occurring in the mouth. A practical microscopist, Mr. CHARTERS WHITE, has devised the plan of placing sections of bone or dentine in collodion stained with fuchsine which prevents the Canada balsam in which they are mounted entering the canaliculi or dentinal tubes and obliterating them. Dr. MILLER of Berlin has published some interesting pathological researches with reference to elephants' tusks. The fifth and greatly enlarged edition of "Harris's Dictionary of Dentistry" and "Introduction to the Study of Metallurgy" by R. C. ROBERTS-AUSTIN are two useful works of reference for the dental practitioner. The supply of artificial teeth to the necessitous poor by the Dental Hospital of London is now in full working order, and the staff has been increased by five assistant-dental surgeons, so that patients are now attended every afternoon except Saturdays (why except Saturdays?). The dental department of Guy's Hospital has been greatly enlarged, the National Dental Hospital are on the high road to obtaining more commodious premises, and on all sides in the provinces we hear of improvements in dental departments and dental hospitals, which show an increasing appreciation of these institutions. The more stringent restrictions enforced by the Medical Council with regard to the registration of Dentists under Clause 37, or the Apprenticeship Clause, have been universally appreciated by the dental profession.

Chemistry.

Although but few bodies of special therapeutic importance have during the last twelve months been added to the already long list, nevertheless the host of newly discovered substances that have been brought forward within the last decade, including many antipyretics, antiseptics, and hypnotics of the greatest value, constrains us to admit that chemistry is ever willing to serve in the interests of medicine. Chemistry is to do more, according to the recent opinions of our eminent authorities, to elucidate the mysteries which surround the nature of infectious diseases than any other branch of science, and, as Dr. BURDON-SANDERSON said in his admirable and recently delivered Croonian lecture, while we must carefully guard against its being implied that any progress in the discovery of the chemical agencies by which diseases are produced or prevented can be made without the bacteriological method, yet the question of infection has become—as many clear-sighted pathologists foresaw that it necessarily would—more and more chemical and less morphological. It is therefore growing increasingly imperative that the subject of chemistry should not be looked upon as merely one of minor importance in, or as a preliminary to, the medical curriculum. In almost all the introductory addresses delivered to students this year chemistry was significantly and prominently brought forward by the speakers, and regarded as a subject of paramount importance to the medical student.

In reviewing the progress effected in chemical science in 1891 one thing is apparent—viz, that whereas chemists have in the last decade given most of their attention to the tempting field of organic chemistry, this year the work done in the inorganic field would seem to preponderate. It is surprising to find, for instance, how little chemists have cared to investigate the metals and non-metals. Yet the researches of KRÜSS on cobalt and nickel, of THORP on the oxides of phosphorus, of MOND on the metallic compounds of carbonyl, of MOISSAN on fluorine, have brought new and intensely interesting facts to light; and there is promise of not less interesting results being gained at no very distant future. Some interesting compounds of glucose with the oxides of nickel, copper, and iron were successfully prepared early in the year by A. C. CHAPMAN. The iron compound $2C_6H_{12}O3Fe_2O_3$, soluble in water to a red solution, may possess properties of importance to medicine. The most brilliantly coloured alloy as yet known was discovered by Professor ROBERTS AUSTEN of the Royal Mint. It contains about 78 per cent. gold, the rest being aluminium; it has a rich purple colour, and magnificently bright ruby tints are obtained when light is reflected from one surface of the alloy to another. Indigo-carmine was successfully synthesised by Dr. HEYMANN in the laboratory of Messrs. BAYER of Elberfeld. The discovery of this process is obviously of immense concern to the dyeing industry, and already 60 per cent. of the theoretical yield of indigo-carmine has, it is said been attained. Of special interest are the new ammonium haloid compounds of sulphur urea obtained by Professor EMERSON REYNOLDS, one of which reverses the lights of a negative developed in eikonogen, so as to produce at once an excellent and perfect positive. *Apropos* of photography, A. RICHARDSON explained, at a meeting of the Chemical Society, that when silver chloride is exposed to light under water oxygen is evolved partly as ozone. Further particulars of the new oxide of sulphur—sulphur peroxide (SO_4)—were communicated by Professor TRAUBE of Breslau.

It is obtained as a crystalline deposit when a solution of sulphuric acid of definite strength is submitted to electrolysis. It decomposes readily into oxygen and sulphuric acid. The unique chemical compound of nickel with carbon monoxide has aroused widespread interest. It is obtained as a colourless liquid body at 43° C., and solidifies at 25° C. by passing carbon monoxide gas over finely divided nickel. Pure nickel has thus been extracted from nickeliferous ores by means of carbon monoxide. Articles plated with pure nickel are produced simply by exposing heated moulds or goods to the nickel-carbonyl vapour or by immersing them in a solution of the compound in certain solvents. W. PULLINGER has described some interesting volatile platinum compounds in which platinum is associated with carbon monoxide and either chlorine or bromine. A new antiseptic, called microicidine, a compound of naphthol and soda, was brought before the French Academy of Medicine by Professor BERLIOZ. Microicidine is said to be neither poisonous nor irritant, is twenty times as active as boric acid, and much more soluble than thymol, carbolic acid, &c. At a meeting of the Chemical Society in June, M. MOND described a volatile compound of iron with carbon monoxide similarly obtained, and giving similar reactions to the nickel compound (*vide supra*). Sir H. ROSCOE subsequently discovered the presence of this volatile compound in water gas which had been stored under pressure in iron cylinders. He had occasion to investigate the properties of water gas, with the view of applying it to lighting purposes. The gas burns with a blue, non-luminous flame; but after prolonged contact with iron he noticed that the flame was distinctly yellow, and it deposited iron or the oxide, on the steatite burners. A new compound of hydrogen with copper was discovered by A. LEDUC. It was obtained in the course of some experiments in the preparation of pure nitrogen by passing undried air, deprived of carbonic acid, over copper turnings, in a glass tube heated to redness, and then reducing the resulting oxide by hydrogen. Professor VIVIAN LEWES communicated the results of his important experiments on the spontaneous ignition of coal. He attributed it, not to the oxidation of pyrites in the coal, but rather to the power possessed by coal of absorbing oxygen, which causes the slow combustion of some of the hydrocarbon constituents even at ordinary temperatures. The year 1891 has not found in any degree abated the zeal of the eminent *savant*, Professor CROOKES, so well known for his brilliant researches on radiant matter spectroscopy. He has described some most interesting experiments on the electrical evaporation of metals and alloys. He showed that if a brush of gold is placed in a vacuum tube and connected with the negative pole of an induction coil at an ordinary temperature, and if a piece of glass be placed underneath the gold in the tube, on passing the current a metallic mirror appears on the glass, increasing in thickness to a leaf, which can be peeled off, and which is perfectly homogeneous. Films of silver and platinum can also be obtained. It is found that different metals thus treated evaporate at different rates; one or two, such as aluminium and magnesium, being apparently non-volatile. It is thus possible, in the case of the aluminium-gold alloy discovered by Professor ROBERTS AUSTEN (*vide supra*), to separate a large portion of the gold from the aluminium by electrical evaporation. Professor C. M. THOMPSON has been unable to confirm the results of KRÜSS and his colleagues in their experiments with the rarer earths, which led them to announce the probable existence of twenty new elements. A novel suggestion in the way of the utilisation of waste products has occupied the attention of brewers this year. It is proposed to utilise the greater portion of the carbonic acid gas, which is produced to the extent, it is calculated, of 25,000,000,000 gallons in the fermenting vats of England's breweries. Hitherto this has all been allowed to escape. A large proportion of this gas, Sir C. CAMERON reports, could be condensed to liquid at a cost not exceeding ½d. per pound, but probably not less than ¼d. per pound. The process of liquefying the gas is successfully carried on at Guinness's brewery, Dublin, the liquefied gas so prepared being perfectly free from any peculiarity of flavour or odour. It is pointed out that the carbonic acid produced at soda-water works costs about 4*d.* per pound, and it is safer, and in every way more desirable, to use in beverages carbonic acid derived from a food substance such as grain, rather than from mineral sources. It will be interesting to know the line of action that strict temperance advocates will adopt should they come to learn that their favourite beverages are aerated and made palatable by means of a gaseous by-product of the brewing process. Further contributions by MOISSAN on the properties of fluorine have created a lively interest in the chemical world. The properties of this element were only recently described in THE LANCET. Fluorine is probably the most active of the chemical elements, and the fact, that in order to make the necessary observations the experiments had to be conducted in a platinum tube provided with fluor spar windows, may be regarded as sufficient proof of its extraordinary activity. The enormously low temperatures obtained by Professor PICTET of Geneva, in his "laboratoire à basses températures," has resulted in some interesting and important observations. The purification of chloroform by crystallisation has thus been accomplished; cognac and ether have been solidified, and mercury "licked" into almost any required shape. The subjects discussed at the Hygiene Congress in the Chemistry Section were amongst the more important of those relating to matters of public health and sanitation; fogs and the disposal of sewage furnish examples. Abstracts of the papers appeared in the special Congress number of THE LANCET. It can hardly be complained that chemists have not contributed to science their share of original research during the past year; and the results gained are, so far, evidence that chemistry is a line of study which has done much, and promises to do still more, to promote the cause of science, of civilisation, of medicine, and of the arts and manufactures. A mere glance at the long list of subjects which have been faithfully studied and investigated must give rise to an instinctive feeling of admiration for the patient and willing investigators who pursue this branch of inquiry for the extension of knowledge. Dr. BACCELLI, in his scholarly address to the members of the Italian Congress of Medicine, said: "If the liberty we worship, the liberty of science, which knows nothing of privilege or title-deeds, with free research, free opportunities, free examination, has for ever

destroyed the *ipse dixit* of old, it has equally imposed on all of us the duty of recognising and appreciating the labours of our fellow-workers, and this duty will be felt by us as the bond of indissoluble brotherhood." All lovers of science will echo and re-echo this sentiment.

Sanitation and Public Health.

Whilst the year now drawing to a close has been marked by some increase in general mortality, there are certain features in the vital statistics which must afford satisfaction to those who are interested in the promotion of public health and in the prevention of disease. Thus, during each of the first three quarters of the year the deaths from continued fever and from scarlet fever were substantially below the average, and during the third quarter of the year the rates from those two causes were the lowest on record in this country. Scarlet fever is largely preventable by means of careful isolation, and it is unquestionable that we have made considerable progress in the provision and in the use of those isolation hospitals which are now so often erected by sanitary authorities; indeed, England may be said to lead the way in this respect amongst the civilised nations. Then, again, the control exercised by medical officers of health and school authorities, with a view to preventing infected children mingling with their school associates, has been placed on a footing which is intelligible to all, and the value of which is increasingly appreciated by those who are concerned. Our continued fever is, in the main, enteric fever; and since this disease responds almost above all others to intelligent sanitary administration, the statistics of our first three-quarters must be accepted with satisfaction. Since the beginning of October the disease has, as is commonly the case at this season of the year, distinctly increased, and there is reason to apprehend that, though the mortality from this cause may not in the end exhibit any very marked increase on the corresponding quarter of previous years, there has been a somewhat exceptional prevalence of a mild form of this disease. Since the adoption of a system of compulsory notification of infectious diseases by so large a proportion of the sanitary authorities of England and Wales, we hear more readily than formerly of these occurrences, and it may yet transpire that the excess of the last few months is rather due to this cause than to any other. Be this as it may, enteric fever will long be associated in the minds of the British public with the closing weeks of the present year in consequence of the attack from which Prince GEORGE of WALES has suffered. Like so many recent attacks, his has, happily, taken a favourable course, and it has, apart from this, presented features of exceptional interest. It has once more brought into prominence the sanitary state of the city of Dublin, through which flows one of the foulest and most offensive sewage streams in the world; and it has involved considerations as to the natural history of the disease, notably that relating to heredity and sex as predisposing to the reception of the infection, a question which is likely to receive increased attention on the part of students of the fever. But whilst certain among the diseases commonly regarded as preventable have shown a marked tendency to diminution, others have had an opposite tendency. This is the case with measles and diphtheria, both of which cause a very high mortality amongst children in our midst. They are both diseases which are extremely infectious at an early stage, during which they are apt to remain unrecognised; they both attack children at school ages, and they have both exhibited a tendency to increase since success has been attained, under the provisions of the Elementary Education Acts, in aggregating the children of the poorer and the labouring classes together for many hours of the day in school-houses. With regard to diphtheria, "school influence" has been proved to be largely responsible for this increase. Inquiry is now being made by the Local Government Board as to the conditions under which measles is making headway in our midst, and the time will soon come when we shall have to ascertain how we can secure the full value of the Education Acts without submitting children to any new and needless risk. The increase in the general death-rate to which we adverted at the onset, and which was mainly marked during the spring of the year, had, however, another explanation. It was essentially due to a recrudescence of the epidemic influenza which prevailed last year, which reappeared in full force about the month of May last, and which, after some abatement, is now again somewhat widely distributed, not only in our midst, but in many other parts of the world. It is difficult to trace the full effects of epidemic influenza on the mortality statistics, because its fatality is much more often an indirect than a direct one; the actual causes of death being attributed to diseases induced or aggravated by influenza, rather than to the immediate consequences of the acute epidemic ailment. It was early in April that influenza reappeared in epidemic form in England, and it is notable that, as in the preceding year, it first manifested itself on our eastern coast; the main incidence of the disease being in the valley of the Humber, in Hull, Leeds, the Yorkshire Wolds, Sheffield, and again in Lincolnshire. But it was not long before the epidemic became more widely diffused, and by the end of the month outbreaks were reported from a number of places so widely apart as Northallerton, Canterbury, East Essex, Birmingham, Ashton-under-Lyne, York, and London. At Sheffield the disease became widely spread, and in one week the general rate of mortality actually rose to 57 per 1000 living. Many of the nurses in Guy's Hospital, a large number of young people in North London, *employés* in Woolwich Arsenal, and many other special communities were attacked. Neither sex nor status was spared, nor were extremes in age exempt. If anything, those occupying the higher social positions, and especially those who devote a large amount of time to arduous brainwork amongst the male sex, suffered most. Thus amongst the sick were numerous members of both Houses of Parliament, Queen's counsel and other members of the bar, physicians, surgeons, bishops, and officers of the State. During the month of May a still wider diffusion of the disease occurred, and some notable fatalities took place. In several workhouses, too, the epidemic prevailed on a wide scale. During the summer months there was an abatement of the disease, but with the advent of October news of the invasion of fresh localities began again to accummulate, many large centres of population being involved both at home and abroad. Both in the spring and in the autumn there was a serious tendency to complication of the disease with pneumonia,

and to this cause some of the most prominent deaths were due. Indeed, it was surmised by some observers that there appeared to be some definite relation between epidemic influenza and infectious pneumonia, but it is difficult to prove that the former acted in any other way than as a predisposing cause to the latter; and it is certain that some of the most serious, virulent, and contagious attacks of infectious pneumonia could not in any way be traced to influenza as an antecedent. The legislation of the year has included the passing of the Public Health (London) Act, 1891, which will largely remove the doubt which has existed amongst metropolitan authorities as to what their true powers and duties were under the numerous enactments which are repealed by the new statute; and in this way it is believed that increasing efficiency will be secured. Coöperation between factory inspectors and sanitary authorities is secured under it, with a view to the amelioration of the health conditions under which many of the operative classes have to work; the assistance of relieving officers in the detection and reporting of nuisances is provided for; a new form to ensure improved information as to notified cases of infectious diseases has been arranged; and the duties and status of medical officers of health and of sanitary inspectors have been so far modified as to render necessary the compilation of new regulations as to the appointment and duties of such officers. One of the most important provisions of the Act is the power given to the various metropolitan sanitary authorities to make by-laws as to a number of matters. Whether this will result in benefit or confusion depends very much upon the question as to how these will be contrived. That which may be imperative, by way of by-law, in one part of the metropolis, might become a mere irksome and useless restriction in another part; and yet the value of uniformity, in so far as principles are concerned, ought not to be lost sight of. Some of the more important matters involved in this consideration will come to the surface in connexion with the proposed new Building Act for London; and it is certain that the matter calls for and deserves very careful attention if the utmost procurable advantage is to be attained as the result of the new metropolitan sanitary legislation.

Forensic Medicine.

Cases of outstanding importance from a medico-legal point of view have not been numerous during the past year, but there has not been wanting in this department of medical science cases of interest to the profession. The appearances observed in bodies burnt to death formed the subject of an admirable paper by Sir WM. JENNER, which was published in THE LANCET of Aug. 22nd, 1891. Although the cases recorded in the paper happened many years ago, points of both pathological and chemical interest are set forth which demand careful attention. It is sad to recall the incidents connected with the "WHITEFOORD" case. The prisoner was a qualified medical man, who had practised for several years in Regent's Park. He was indicted for having conspired with a chemist called JONES to procure the abortion of HILDA HAMMETT, and with being principals before and after the fact. WHITEFOORD was sentenced to five years penal servitude and JONES to eight months' hard labour. The case of "KERR" attracted some notice in our columns at the beginning of last year. The case was tried before Mr. Justice STEPHEN in July, 1889, when WILLIAM KERR was convicted of having murdered a single woman and was sentenced to death. This sentence was commuted to penal servitude for life, and afterwards to a term of fourteen years' imprisonment. The case was brought under our notice at the beginning of the year, and after going through the voluminous documents placed at our disposal, we came to the deliberate conclusion that "had all the facts and their possible interpretation been placed before the judge and jury there would have been a more favourable charge and a different verdict," and we commended certain comments on the case to the notice of the Home Secretary, in the hope that he might find the crime of which KERR lies convicted "not proven." In the toxicological department of this science nothing striking has occurred during the year.

Royal College of Physicians.

There has been much activity in the College of Physicians during the year, especially in its educational sphere. In the spring, negotiations with the University of London to secure adequate recognition of the College and the College of Surgeons, together with the inclusion of the metropolitan medical schools as "constituent colleges" were so far successful that the final scheme issued by the Senate of the University was accepted as satisfactory by the College. But the rejection of that scheme by a decisive vote in Convocation, and the action taken by the Privy Council in respect to the formation of a new teaching university in London, compelled the College to take further steps, and, together with the sister College, it claimed to be constituted the medical faculty in the projected university. That claim was disallowed by the Privy Council, and as neither College was contented with mere representation on the Senate of the Albert University, these important medical corporations remain outside, depending on their prestige for the continuance of the large share they have hitherto taken in licensing. Owing to the resolution of the General Medical Council to extend the curriculum to five years, the Colleges have been busied in the preparation of schemes of examination and education, and much pains have been expended, by the College of Physicians in particular, to obtain the views of those most concerned in teaching. The result has been the production of alternative schemes by each College, and the next step will consist in a conference between delegated representatives from each body with the object of arriving at a common understanding on the matter. The General Medical Council has also been instrumental in obtaining certain important alterations, especially as regards laboratory instruction and practical work in sanitary science, in the requirements of candidates for the diploma of Public Health granted by the College. The action taken by the General Medical Council at its last meeting with respect to the right of the College to the registration as full qualifications of its licentiateship and membership came with some surprise upon the College authorities; but the matter is one which is awaiting judicial decision, which it may be hoped, in the interests of the College and of the profession, will soon be obtained. The College appointed a Committee

upon the subject of Midwives' Registration, which reported in favour of State registration; and it also assisted in preventing the passage into law of the clauses of the Factory Acts Amendment Bill which abolished the office of certifying medical officers. Nor should the part taken by the President of the College in supporting the claims of the army medical officers, which were afterwards allowed in the Royal Warrant issued on this subject, be suffered to pass unrecorded. At the present time the College is engaged in watching the interests of English practitioners in France, which will be considerably affected by a Bill now under consideration by the French Assembly. Passing from these public concerns to the internal management of the College, it may be noted that for the fourth time Sir ANDREW CLARK was elected President of the College, the duties of which office he so faithfully performs; Sir DYCE DUCKWORTH has been re-elected representative of the College on the General Medical Council; the Harveian Oration was delivered by Dr. W. H. DICKINSON, and after its delivery the President bestowed the Baly Medal on Professor MICHAEL FOSTER, and the Moxon Medal (given for the first time) on Sir A. B. GARROD. The Gulstonian Lectures were given by Dr. THOS. OLIVER, his subject being Lead Poisoning; the Lumleian Lectures, on Heart Disease, were given by Dr. BROADBENT; the Milroy Lectures, on the Etiology of Diphtheria, by Dr. THORNE THORNE. In the autumn Dr. BURDON-SANDERSON gave, at the Examination Hall building, the Croonian Lectures, in which he reviewed the progress of inquiry into the Origin and Nature of Infectious Diseases; and the Bradshaw Lecture was delivered by Dr. W. H. ALLCHIN, who took for his subject Duodenal Indigestion. All these lectures have been published in the columns of THE LANCET. The occasion of the meeting of the International Congress of Hygiene was marked at the College by a banquet given by the President to H.R.H. the Prince of WALES and several eminent representatives of medical science, and by a *soirée* given at the College to the members of the Congress. So that there can be no question that the College has taken an important share in the political, educational, and social matters affecting the profession, as well as in those ethical questions which have engaged the attention of the Censors' Board. The record of the year should not close without notifying the gratification felt by the College at the mark of Royal favour conferred on one of its most esteemed Fellows, Sir RICHARD QUAIN, and also the regret with which, in the death of Sir RISDON BENNETT, the College has lost one of its former Presidents and most valued supporters.

The Royal College of Surgeons.

At the Royal College of Surgeons, the year which is just closing has witnessed, if we are not much mistaken, a greater tendency on the part of the Council to conciliate the body corporate of the College. Meetings of the Fellows and Members were summoned in the theatre of the College: on May 11th, in reference to the scheme for the reconstitution of the University of London; on July 30th, in reference to the proposed action of the College with regard to the new University scheme; and on Nov. 5th the annual general meeting was held to receive the annual report of the President and Council. We need not here give the proceedings of these meetings; they are well known, and indicate a tendency to reaction in favour of conciliation; it would be advisable, however, in the future to hold these meetings before a decision of the Council has been arrived at, and not afterwards. The annual election of members of the Council was held on July 2nd; it was the third election conducted under the new regulations, which permit of voting by proxy, and the great advantage of this method of voting was again exemplified. The number of votes recorded at this election was 454. Of these, 119 were personally recorded, five of them being rendered invalid through the carelessness of the voters. Of the proxy votes thirteen arrived too late for the poll. In 1889 the number of votes recorded was 600; in 1890, 527. There were three vacancies to be filled at the election. Sir W. MAC CORMAC was re-elected, and Messrs. JESSOP and RIVINGTON were elected. Mr. THOMAS BRYANT was reappointed President for a second term, and presided at the annual meeting of Fellows and Members in November, at which the report of the Council was presented. This report was different from those which had preceded it, being written in narrative form, and giving a record of the work of the College in the various departments, such as the museum, library, laboratories, examinations, finance, lectures, obituary notices, college prizes, &c. Continued improvement has been made in the interior of the College, whilst the forecourt of the building has been enlarged and much improved at considerable outlay. The library has been much more in request by members of the profession, and the numbers of those who avail themselves of its resources increases month by month. Mr. HULKE delivered the Bradshaw Lecture on Injuries to the Spine. The Jacksonian prize was awarded to Mr. WILLIAM THORBURN, for a dissertation on Injuries of the Spinal Column and its Contents &c. The Council of the College gave a *conversazione* in honour of members of the International Congress of Hygiene and Demography, early in August. With regard to the finances of the College, it appears that the income from all sources amounted to £36,953 4*s.* 3*d*, the largest receipt being from fees paid by candidates for the diplomas of the College—viz., £19,393 17*s.* 6*d.* The expenditure for the year amounted to £34,119 3*s.* 7*d.*, leaving a balance of £712 2*s.* 7*d.* Examiners' fees alone amounted to £9178 1*s.* Extension of College premises cost £9428 11*s.* 1*d.* The laboratories at the Examination Hall are more appreciated, and it is contemplated to increase their usefulness by permitting those working there to lecture, or otherwise make more fully known the results of their investigations.

Public Medical Services.

Turning to the public medical services, and especially to that of the Army Medical Staff, there have been several very notable changes during the year. Considerable discontent was aroused by the abolition of relative rank, the officers of the Medical Staff declaring that they were, in reality, left without any army rank whatever. After much controversy the War Minister referred the matter, together with other grievances under which medical officers alleged they were labouring, to the consideration of a committee, known as Lord CAMPERDOWN'S Committee. Representa-

tions were made by the medical institutions of the country to the War Minister in support of the claims of the Medical Staff, backed up by some very forcible letters in the same direction from Sir ANDREW CLARK, the President of the Royal College of Physicians. After some delay Mr. STANHOPE publicly expressed his readiness to meet the wishes of the medical officers, and carry out most of the recommendations of Lord CAMPERDOWN'S Committee. The new Army Medical Warrant first saw the light in August last, by which certain alterations of rank were made, the titles at present in use introduced, and sick leave granted to medical officers on the same conditions as those laid down for regimental officers; and quite recently we were able to publish the Warrant allowing medical officers to count a period of half-pay towards retirement, provided the half-pay did not exceed a year, and arose out of sickness contracted in and by their military duties. The War Minister himself held that the medical officers always had what is called "substantive rank." Be this as it may, it is noteworthy that in the Warrant of August last the term "substantive" was applied to their military rank for the first time. There cannot be two opinions about the sick leave and half-pay concessions; they were right and just in themselves, and are real and substantial gains to the Medical Staff. As there will be many retirements next year, we may expect, too, the flow of promotion to be accelerated. From the India Office we have a Royal Warrant issued this month regulating the rank and promotion of the Indian Medical Service, giving substantive rank to the medical officers, and assimilating their titles to those of officers of the medical staff. The officers of the Indian Medical Service perform a large amount of excellent work, civil and military, much of it of a high scientific and professional character, in India. As regards the Naval Medical Service there is not much to be chronicled. It is believed that its officers are quite contented with their present rank and titles.

The General Medical Council.

The Medical Council met twice in the course of the year. The first meeting was on May 26th, and it continued sitting for seven days. The second sitting was in November, from the 24th to the 28th, inclusive—in all five days. On the whole, the year has been an eventful one. One very sad event was the death of Professor JOHN MARSHALL, F.R.S., on Jan. 1st, which deprived the Council of a president who for wellnigh five years had served it with the greatest faithfulness, ability, and dignity. The first business at the May meeting was to appoint a president. The election fell with natural unanimity on Sir RICHARD QUAIN, who for twenty-eight years had been on the Council, and had long taken an active part as treasurer, chairman of the Pharmacopœia Committee, and member of the Executive Committee. Among the chief subjects of discussion at this meeting was a motion for increased instruction in practical midwifery, in which Dr. GLOVER tried to show the inadequacy of the present requirement of attendance on twelve cases as an alternative to three months' attendance as pupil in a lying-in hospital. He held that there was no proportion between these alternatives, and that in its present form the requirement was absurd. But he failed to convince the Council, and the absurd requirement still has its sanction. Several cases of alleged infamous conduct, from a professional point of view, were brought under notice. One practitioner was removed from the Register for issuing disreputable and objectionable advertisements, for which conduct his name had also been erased from the Register of Nova Scotia. A discussion on the neglect to use County Hospitals in Ireland for purposes of clinical teaching was initiated by the Council receiving a letter by Mr. LAFFAN, written to the Lord President, and transmitted by him for the consideration of the Council. The Council expressed sympathy with the general purpose, but held that it was a question for the medical authorities rather than for the Council. The regulations of the bodies granting diplomas in State Medicine were discussed at some length on the report of the Education Committee. The Defective Preliminary Education of medical students was brought before the Council in a letter from the Secretary for War, who stated that he had introduced regulations making bad spelling a cause of rejection for admission to the Army Medical Department. The subject was referred to the Education Committee, and finally the Council resolved to ask the Directors-General of the Medical Departments of the Army and Navy and the Indian Army Medical Office to supply to the registrar of the Council the names of those in the professional examinations showing manifest defects in spelling or other part of general education, in order to trace the faulty preliminary examinations. The Council further resolved that in future no pass certificate be accepted in general education unless all subjects are passed at one time. A motion by Dr. HERON WATSON to enlarge the number of institutions recognised as teaching physics, chemistry, and biology was unsuccessful. The Council was, at a very short notice, asked to pass a resolution in favour of creating facilities for London medical students to obtain degrees in medicine. They did so; but in the motion discouraged the creation of any degree-conferring faculty independent of the existing university and medical licensing authorities. The November meeting involved the discussion of many important questions and cases; but it is so recent that we need not here further refer to it. Sir RICHARD QUAIN had by this time got well into harness, and both in his address and in his management of the Council showed to advantage as president. A motion that the Council should move for an increased number of direct representatives was very ably and temperately argued by Sir WALTER FOSTER, and an exhaustive discussion followed, but the Council by a very large majority rejected the motion. The Council invited certain memorialists to lay before the Executive Committee any facts or cases of "covering" in the department of Dental Practice. The Council arranged for an Inspection and Visitation of examinations to extend over five years. A new departure is to appoint one inspector for three years for all divisions of the United Kingdom. As affecting the Council another noticeable event is the recent election of direct representatives. The direct representatives, whose present term of office lasts till Jan. 1st, have been re-elected for five years in the following order:—Dr. GLOVER, Mr. WHEELHOUSE, and Sir WALTER FOSTER for England and Wales, and Dr. KIDD for Ireland; whilst Dr. BRUCE was returned unopposed for Scotland.

The Albert University.

During the past twelve months the various steps towards the formation of a Teaching University in London have followed one another rapidly. At the end of 1890 the University of London had received a letter from the Lord President of the Privy Council, asking them as to their intentions in regard to a new Charter, in accordance with the recommendations of the Royal Commissioners in their report of April 29th, 1889. It had already been intimated by Lord CRANBROOK that a year's grace for consideration ought to be allowed to the University to see whether the authorities were disposed to agree to the suggestions made by the Royal Commissioners, and could so alter the constitution of the University as to meet the demand for a local Teaching University and amend the grievance of the London medical student, and so permit him to obtain a degree on terms equivalent to those enjoyed by students in the provincial and Scotch medical schools. A finally revised scheme, after many others had been put forward, was passed by the Senate, and in May last submitted to Convocation, whose assent is necessary before the University can apply for a new Charter. That scheme was, unfortunately for its promoters, so complex that it gained but few firm friends, and aroused opposition from many sides, and was rejected by a large majority in May last. It placed London students in Arts and Science under one committee, provincial collegiate students under another committee, and non-collegiate students under a third committee. Medical students were to undergo their examination for a "pass M.B." degree under the control of a joint board appointed partly by the Senate of the University and partly by the authorities of the Royal College of Surgeons of England and the Royal College of Physicians of London, whilst "Honours" students were to be entirely under the control of the Senate of the University. Obviously such a complicated division of duties was fatal to the adoption of such a scheme, and the Senate experienced the mortification of seeing it rejected by such a majority that any further attempt at forming at once an Imperial Examining Board for the empire and a local Teaching University for London had to be abandoned by the existing authority. The two years of conferences between the University of London and the various bodies interested in higher university education in London and in the removal of the special grievances under which the London medical student laboured were practically rendered useless, and now came to an end. The University of London, in its attempts to agree with the Royal Colleges, was frustrated by the action of its own graduates in Convocation. The Lord President of the Privy Council at once took action after this vote in May, and gave notice that he would fix an early date for a meeting of a committee of the Privy Council to take into consideration the petition of King's and University Colleges "to be a University in and for the London district, having power to grant degrees in the Faculties of Arts, Science, and Medicine, with power to add other Faculties." The petition of the Royal Colleges of Physicians and Surgeons had already been rejected by the Royal Commissioners, and the University of London had been granted a full time to accommodate itself if possible to the new demand, and had completely failed in so doing. On July 13th the Lords of the Privy Council practically passed, with the suggestion of a few modifications, the Draft Charter of the two teaching Colleges, giving time for the Royal Colleges to consider whether they would accept a representation on the Council of the proposed university. The representation suggested was insufficient to meet the demands of the Royal Colleges, which were desirous of controlling the entire medical education of the London student; and hence the Royal Colleges held aloof. The ten medical schools (excluding those of King's and University Colleges), however, consented to accept the proffered representation on the Council, and they now stand as colleges of medicine in the proposed university. Such a university, if properly worked, has the foundations for the largest medical university in the world, and has in its hands powers for improving and consolidating medical teaching, as well as giving free scope for individual effort in London, in a way hitherto undreamt of. The Draft Charter must lie on the table of both Houses of Parliament for thirty days, and, as the Houses assemble early in February, the fate of London medical education will soon be decided. Rumours are abroad that attacks may be made on the Arts side, but we cannot anticipate that they will seriously imperil the passing of the Draft Charter, especially as it must be accepted or rejected *en bloc*. The chief provisions of the Draft Charter as finally amended and passed by the Lords of the Privy Council are—the formation of an executive council of forty members, composed of six Crown nominees, six representatives from King's and University Colleges, ten representatives of the other medical schools (i.e., one from each), sixteen members chosen by the Faculties of Arts, Laws, Science, and Medicine, a Chancellor and a Lord High Steward (the Lord Mayor of London for the time being), making a total of forty, of which at least fourteen will be members of our profession. Faculties composed of assemblies of teachers will have important electoral powers; and boards of studies, elected from those teachers, will be appointed for consultative purposes and to advise the Council. The local area is to be preserved by all constituent colleges being necessarily within the area of the County of London, and its teaching character is insisted on by a clause requiring two years' residence, in the latter part of their studies, of all intending graduates of the University. If the Draft Charter passes in March next, as we hope may be the case, London medical students will be able to pursue their studies under equitable conditions, and will be placed in a position which has practically been denied to them since the passing of the Medical Act of 1858.

Medical Education and the Five Years' Curriculum.

With the advent of the new year two of the most important changes that have been introduced by the General Medical Council since this body has been called into existence will come into effect, and will materially alter our present system of medical education. The one affects the preliminary and the other the professional education of the future medical student. Since October 1st, 1885, the preliminary examination which must be passed before registration, comprised (1) English Language, including Grammar and Composition; (2) Latin, including Grammar, Translation from specified authors, and Translation of easy Passages not taken from such authors; (3) Elements of Mathematics, comprising

(α) Arithmetic, including Vulgar and Decimal Fractions, (β) Algebra, including Simple Equations; (γ) Geometry, including the first book of Euclid; (4) Elementary Mechanics of Solids and Fluids, comprising the elements of Statics, Dynamics, and Hydrostatics; (5) one of the following optional subjects—Greek, French, German, Italian, any other Modern Language, Logic, Botany, Zoology, and Elementary Chemistry. The student could pass in any one or more of these subjects, so that frequently he only passed in the necessary subjects by submitting himself again and again to examination. By dint of taking the subjects separately almost anyone could be ensured against failure. But the regulations passed by the General Medical Council in June, 1890 and 1891, and which will come into force on January 1st, 1892, for every student who has not passed a part of any preliminary examination at the end of the year, will make great changes in the preliminary examination. In the first place, the whole of the subjects must be passed at the same time; and, in the next place, Books I., II., and III. of Euclid, or their subject-matter, will be required instead of one book only; whilst Elementary Mechanics is dropped altogether. The sciences are also omitted from the list of optional subjects, so that Botany, Zoology, and Elementary Chemistry no longer appear in the preliminary list. The subjects of the preliminary examination are now approximated to those taught in every good school, and should be mastered in the regular routine of a good school education. The sciences are passed on to the professional examinations. Curiously enough, mechanics is not included in this scientific curriculum, so that a boy will now have to be taught the physics of heat, light, and electricity, without his having necessarily been made acquainted with the elementary laws which govern matter and force. Surely mechanics and physics should be together included and insisted on at the first scientific examination of the student. The great change in the professional curriculum was decided on by the General Medical Council in June, 1890, when it was resolved that a period of five years, instead of four, as at present, should be devoted to professional studies after registration, that this regulation should come into force on Jan. 1st, 1892, and that the fifth year should be a clinical one. The resolution stands thus: "The fifth year should be devoted to clinical work at one or more of such public hospitals or dispensaries, British or foreign, as may be recognised by any of the medical authorities mentioned in Schedule A of the Medical Act, 1858, provided that of this year six months may be passed as a pupil to a registered practitioner holding a public appointment, or possessing such opportunities of imparting practical knowledge as shall be satisfactory to the medical authorities." The revised scheme of the Conjoint Examining Board in England has now passed the two Royal Colleges, and the option of spending six months of the final year as a pupil to a registered practitioner has been struck out. The teaching authorities in London, and the direct representatives of the profession in the General Medical Council, evidently do not agree as to the advantages of a six months' pupilage to a general practitioner. The list of subjects of professional study and examination which will satisfy the General Medical Council is as follows:—(1) Physics; (2) Chemistry; (3) Elementary Biology; (4) Anatomy; (5) Physiology; (6) Materia Medica and Pharmacy; (7) Pathology; (8) Therapeutics; (9) Medicine, including Medical Anatomy and Clinical Medicine; (10) Midwifery, including Diseases peculiar to Women and to New-born Children; (11) Surgery, including Surgical Anatomy and Clinical Surgery; (12) Theory and Practice of Vaccination; (13) Forensic Medicine; (14) Hygiene; (15) Mental Diseases. Later recommendations still further define requisite studies, especially in a practical direction. Practically, the five years' curriculum is in vogue at the Universities, as at all of them one year's study is devoted to the preliminary sciences, so that this regulation really compels the licensing corporations to follow the example of the Universities. The scheme of the Conjoint Board in England shows how this can be effected, although in some respects it is only done in a half-hearted manner and with halting steps. The provisions for meeting this five years' curriculum on the part of the other licensing bodies have not reached us; but as the regulation is compulsory throughout England, Scotland, and Ireland, the time has come when every licensing authority must draft its scheme. The Conjoint Examining Board in England, as an experiment, will adopt the plan now passed by the two Royal Colleges, and it has been settled that the examinations will be four in number, and that they will be rearranged thus: (1) Chemistry and Physics, Elementary Biology, Practical Pharmacy (or at the third examination), and any of these may be studied before registration, and Elementary Human Anatomy; (2) Human Anatomy and Physiology, after the expiration of two winter sessions and one summer session; (3) Medicine (including Medical Anatomy, Pathology, Pharmacology, Pharmacy, Therapeutics, Forensic Medicine, and Public Health), Surgery (including Pathology, Surgical Anatomy, and Midwifery and Diseases peculiar to Women—but this latter subject may be postponed until the next or final examination). This examination cannot be passed until four years have expired from the date of registration, and at the end of the fifth year the candidate will be examined in Clinical Medicine and Clinical Surgery and in Midwifery and Gynæcology, unless he has passed in this latter subject at the previous examination. There are many objections to this scheme, but as it is candidly described by its authors as only an experiment, we shall not criticise it at present, but shall watch its working with great interest.

The Seventh International Congress of Hygiene and Demography.

The past year will be memorable in the annals of British sanitation by reason of the assembling in London of the Seventh International Congress of Hygiene and Demography. The Congress held its inaugural meeting on Aug. 10th, in St. James's Hall, under the presidency of H.R.H. the Prince of WALES, the President of the Congress. The hall was crowded to its extremest limits by a brilliant assemblage of *savants* and sanitarians from all quarters of the globe, who received with enthusiasm the address of welcome pronounced by the Prince of WALES, and also the speeches made by BROUARDEL for France, VON COLER for Prussia, ROTH for Saxony, CORRADI for

Italy, KÖRÖSI for Hungary, and PAGET and BUCHANAN for Great Britain. The work of the Sections was carried on during the four days succeeding the opening, and if a Congress is to be judged by the quality of the work done in the sections, then the Congress of 1891 need not fear the results of comparison with its predecessors or successors. The important debate on Diphtheria and Alcoholism in Section 1, under the presidency of Sir JOSEPH FAYRER, and the brilliant discussion on Immunity in Section 2, in which Sir JOSEPH LISTER (president of the section), METCHNIKOFF, ROUX, KLEIN, BEHRING, KITASATO, HANKIN, and many other leading European bacteriologists took part, cannot fail to leave their mark for some time to come in the records of scientific advance. The work done in Section 9 (State Medicine), under the presidency of Lord BASING, was also of a high order, some of the debates, such as that on the Disposal of the Dead, attracting a crowded and distinguished audience. In Section 3 could be seen, for the first time in this country, an assemblage of pure followers of science, medical men, veterinarians, agriculturists, and landowners met together for the purpose of mutual discussion; and it is not too much to hope that the constitution of this section (which had for its President Sir NIGEL KINGSCOTE, K.C.B.) indicates that the appreciation of pure science is likely to be more widely diffused in the future than in the past. The papers by ROUX, FLEMING, BALLARD, BANG of Copenhagen, and many others were of first-rate importance. The sections devoted to Infancy and Childhood (Mr. DIGGLE), Chemistry and Physics (Sir H. ROSCOE), Architecture (Sir A. BLOMFIELD), Engineering (Sir J. COODE), Naval and Military Hygiene (LORD WANTAGE), and the Division of Demography (Mr. F. GALTON), all bore evidence that the careful selection of presidents and secretaries of sections had been the means of attracting a large number of first-rate workers to the discussions. Important features of the Congress were the meetings devoted to the discussion of Indian sanitation, and presided over by Sir MOUNTSTUART GRANT DUFF, G.C.S.I. The native princes of India have many of them given substantial support to the Congress, and it is to be hoped that the peoples of India may in time rise to a full appreciation of the importance of cleanliness in their villages and homes; for it was evident from the tone of the papers and debates in the Indian Section that the greatest obstacle to the sanitarian in India is the apathy of the great mass of the native populations. The hospitality shown to members of the Congress, both by public bodies and private individuals, was profuse. Her Majesty the QUEEN received fifty foreign and colonial delegates at Osborne, and H.R.H. the Prince of WALES accepted the splendid hospitality of Sir ANDREW CLARK at a banquet given at the College of Physicians to the leading members of the Congress. The City of London, the Royal Colleges of Physicians and Surgeons, and the University of Cambridge were among the public bodies which did honour to our distinguished guests, while the flood of private hospitality was beyond precedent. The final meeting of the Congress on Aug. 17th (under the presidency of Sir DOUGLAS GALTON) was largely attended, and the various speakers were loud in their expressions of gratitude and appreciation. We may fairly look back with satisfaction upon this great Congress, which was attended by over 2700 members and delegates, and we unhesitatingly recognise the public service rendered by those who worked hard to perfect the organisation by which the work of this large and important gathering was brought to a focus. A Congress which received the actual and gracious patronage of the Sovereign, of which the heir apparent was the active President, to which almost all foreign Governments sent delegates, and at which all the chief municipalities in all three divisions of the kingdom were officially represented, was national and international in the fullest sense. It was a Congress of which the nation may feel proud, and this feeling will not, we believe, be diminished when in the course of the ensuing year the voluminous Transactions which are in preparation shall afford unanswerable testimony to the excellence of the work which was accomplished.

British Medical Association.

The British Medical Association held its annual meeting at Bournemouth under the presidency of Dr. JOHN ROBERTS THOMSON, consulting physician to the Victoria Hospital, Bournemouth. The attendance was not so large as usual, perhaps owing to the competition this year of the International Congress of Hygiene. The addresses by the chief speakers and by the heads of sections were numerous, and most of them so good as to make selection invidious. The subject of phthisis and its treatment engaged, perhaps, the greatest amount of attention, KOCH'S genius in the discovery of the bacillus being generously recognised, with the qualifying wish, naïvely expressed by Dr. PYE-SMITH, that he had contented himself with this discovery. A brilliant case of amputation of the uterus during labour by Dr. MURPHY of Sunderland, in which both mother and child were saved, was related. Dr. WILKS brought his large knowledge of pathology and his clinical experience to bear on the question of alcohol, and showed that moderation of view which is highly aggravating to extreme parties in this contest. The political section of the Association asserted themselves, and extracted promises from the chairman of the Parliamentary Committee and Sir WALTER FOSTER. It can scarcely be said, however, that the political debates reach the same standard of excellence, or show the same preparation, as the scientific ones. If the meeting is to be the arena for such debates—and it is a fit arena—discussions should be well organised beforehand, and so arranged as not to interfere unduly with the higher purposes of the Association.

Hospital Mirror.

The same rules as heretofore have continued to guide us in the conduct of the Mirror of Hospital Practice, and the cases which have appeared in this department of THE LANCET have been selected from large numbers sent to us from hospitals and dispensaries throughout the civilised world. They have shown the treatment of many and various conditions, some of them by the administration of internal remedies, others (and the larger number) by the adoption of surgical procedures, in both the general and special departments of medicine. We have continued the custom of making editorial comments on the reports as they have appeared from week to week, and this feature of the department is one which has given

considerable satisfaction to many of our readers, who have expressed their gratification to us in various ways. We cannot afford space to give more than a *résumé* of the many interesting cases which have been brought forward in our columns, and of these the number selected must be few. The task, however, is somewhat difficult, as the average of "rare" cases deserving of special comment is unusually large. A case which will be fresh in the memory of our readers is that of a girl aged nineteen, who died with acute dilatation of the stomach within twelve hours of the occurrence of the first attack of vomiting. She was under treatment for an inflammatory condition of the lower jaw, and at the necropsy there were evidences of acute septicæmia. The stomach was greatly distended, reaching below the umbilicus and far into each lumbar region; the appearance was that of a thin, translucent, membranous sac, in some places stretched to the mere thickness of writing paper. An account of a rare affection of the internal ear, apoplectiform deafness, in this instance the attack being, unfortunately, bilateral, is given. The patient, a railway guard, aged thirty-six, became suddenly deaf on the right side eighteen months before admission to hospital, and a similarly sudden onset marked the occurrence of complete deafness on the left side the day before, but this was accompanied with a loss of consciousness lasting for some hours. No benefit was obtained by treatment. Two cases strongly mark the advance which is being made in the treatment of some of the more fatal complications of middle ear disease. The patients, aged eleven and twenty-seven, were under care with chronic purulent discharge from the middle ear. Thrombosis and suppuration in the lateral sinus with signs of pyæmia ensued. The first patient recovered, after the opening of the mastoid process and incision of an abscess, which apparently resulted from the suppuration of a thrombus of the internal jugular vein, and which had obliterated it; the second patient recovered after the operation of trephining the mastoid process, ligature of the internal jugular vein, and the evacuation of pus from the lateral sinus. A farm labourer aged thirty-seven presented the symptoms of an intracranial aneurysm. These commenced after his recovery from a concussion caused by a fall from his horse sixteen months before. The patient suffered from diplopia, a pulsating exophthalmos, with loud aneurysmal bruit on the left side, and a noise audible to the man himself, which prevented sleep. Pressure on the left common carotid arrested both noise and pulsation, but relief was only temporary. The common carotid was therefore ligatured; as a result of this the bruit soon ceased, and the other symptoms produced by the aneurysm gradually passed off. The cornea of the affected eye ulcerated, however, and the iris became adherent. We have presented our readers with the account of four patients in whom epilepsy, the result of traumatism, was greatly relieved, possibly cured, by the operation of trephining, but cannot do more than allude to them. A curious and most unusual condition, only one other such case having been noted—that of displacement or dislocation of the ulnar nerve—is described in two instances. The first occurred in the person of a married woman aged twenty-eight, who fell and struck her elbow against the edge of a bucket. After the cellulitis which followed the injury had subsided, it was found that the ulnar nerve slipped forward to the front of the internal condyle on extreme flexion, causing pain. The second was in a bookkeeper aged thirty, without history of injury. The condition was similar, and prevented use of the arm. In both patients the nerves were secured in position by sutures, and a good result was obtained. A spontaneous dislocation of the left hip was met with in a little girl aged six, under treatment for acute periostitis of the humerus. Reduction of the displacement was followed by suppuration in the joint, which completely recovered its function after incision of the capsule and irrigation. Two examples of the surgical treatment of pancreatic cysts have been published, and are very important, as but little has been done regarding that condition in this country. The first was that of a married woman aged twenty-four. She suffered from sickness, severe abdominal pain, and the presence of a swelling in the left hypochondriac region for three weeks or so before admission. The cyst was opened from the front, emptied of its contents, drained through the loin, and the anterior opening closed. The lumbar sinus closed in six weeks. The second was that of a woman aged thirty-nine. The cyst, which formed in the right hypochondrium, had been noticed for two years; it was opened through the right semilunar line in 1887; here the sinus persisted, and at the time of the last report malignant growth had developed around the fistula, and the patient was sinking rapidly. Amongst the cases of gastro-enterostomy is one which deserves special mention, as the case was carefully followed to the end. The patient, a married woman, had suffered from symptoms of pyloric cancer for about ten months before the operation (which gave great relief) was performed. Symptoms of pyloric obstruction returned, and about eleven weeks later the operation of jejunostomy was done, and was attended with benefit, but she died from internal strangulation eleven weeks later. It was then found that the communication between the stomach and intestine established at the first operation had closed by cicatricial contraction, excepting for a mere pinhole opening. Cases which must be cited as worthy of special mention are as follows: A woman of twenty-two developed peritonitis after the birth of her first child; on the fourteenth day abdominal section was performed, and a ruptured Fallopian tube removed; she recovered. The successful performance of the Porro-Cæsarean operation on a patient aged thirty-four, suffering from deformity of the pelvis not a consequence of rickets. The occurrence of hernia of the bowel into the right side of the chest through an opening between the external arched ligament and the central tendon of the diaphragm is described in one case of a boy aged sixteen. Another boy of sixteen presented symptoms closely resembling those of strangulated hernia, but due to strangulated epididymis of an incompletely descended testis. A ligature was applied to the abdominal aorta in the case of a man aged forty-five, suffering from a ruptured abdominal aneurysm, but the patient died from anæmia and shock twenty-four hours afterwards.

Special Commissions and other Reports.

Sanitary.—In the first issue of the year we published a special report on the processes of Disinfecting employed in London. These, it was shown, varied considerably in the different localities, and th re appears to be no definite prin-

ciple or rule observed. Some local authorities seemed to have more faith in fumigation than in disinfecting stoves. Nor were the stoves employed built on any one given principle. In some stoves only dry heat was employed, in others a certain amount of steam, without pressure, was introduced. The necessity of employing steam under pressure is not yet generally acknowledged, but it is practised in some cases, and notably by Mr. W. G. LACY, who does the disinfecting work for the sanitary authorities of Fulham, St. Martin-in-the-Fields, Willesden, Wood-green, Richmond, Streatham, and other districts. It is time that distinct rules for disinfecting should be drawn up and enforced equally in all parts of the country. The bacteriological experiments recently made show that many known forms of germ life are only destroyed by super-heated steam under pressure, and that dry heat does not suffice. The report we published gave facts setting forth that the choice of the methods of disinfection to be used should no longer be left to the discretion of each local authority, as their knowledge of the subject must in many instances be very limited. The extraordinary death-rate at Sheffield, attributed to influenza, and which reached the proportion of 70 in the 1000 of the population, led us to institute an inquiry into the sanitary condition of that town. The result did not show that any connexion could be established between bad hygiene and the prevalence of influenza, though the drainage of Sheffield was found to be in a very defective condition. The almost universal use of middens, the filthy way these are emptied, the wretched condition of the small workshops, and the dilapidated and overcrowded state of some of the old houses, doubtless are responsible for the high zymotic death-rate. It is absolutely necessary that a general system of drainage should be at once adopted, and the report we published described what remedies have been proposed, and what difficulties stood in the way of their application. As a contrast to the inactivity of the Sheffield authorities, we fully reported on the very elaborate scheme adopted for the rehousing of the poor of Manchester. Here, at the cost of £103,000, a condemned area is to be rebuilt by the municipality and let out directly to the tenants. The local authority having thus established itself as a model landlord will call upon all other landlords to follow its example under penalty of expropriation. Our report showed, however, that this scheme was somewhat marred in its practical execution by the law which facilitated the incurring of exaggerated and unjustifiable expenses. Our next report showed that what Manchester is now attempting to do Huddersfield has already in a measure accomplished. The Huddersfield local authority was the first, we believe, in England to open a common lodging-house of its own. The town also built and lets directly to occupiers 157 houses. It is, further, the owner of its own tramways, and by running one line of tramways at a loss is able to prevent congestion in the centre of the town and to open out new outlying quarters as suitable sites for artisans' dwellings. The town has seen to the welfare and health of those who work in its service, and has introduced the eight hours day among its tramway servants. This series of reports gives many facts illustrating what measures local authorities have taken to grapple with the great problems of health by doing themselves what private enterprise seemed reluctant to attempt or unable to effect. They may be called experiments in municipal work, and on the score of invading the region of private and commercial enterprise and piling up local indebtedness need to be severely criticised and watched. But the principle of them has long been conceded; what is needed is discretion and judgment. In the cause of public health we made several investigations on the Continent—notably on the measures taken by the Paris municipality to cope with the distress arising from the protracted winter, and on the insalubrious condition of the great Paris hospital La Pitié.

Analytical.—We are able to report continued and increased activity in this interesting and all-important department—a department which, by the enormous labour and work of the founder of THE LANCET in connexion with the adulteration of food and drugs, has become indissolubly associated with the name of this journal. The first Analytical Commission of the year was devoted to an investigation into the manufacture and composition of Biscuits. This subject, of course, was closely allied to that of bakeries and bread-making, which occupied the attention of our Commissioners in the previous year. From an inspection of the biscuit-making factories our Commissioners were able to report that from beginning to end the process, especially as regards sanitary arrangements, was in many respects decidedly superior to that adopted in the ordinary bakery where the quartern loaf is produced. To give some idea of the labour and care which this inquiry entailed, no less than eighty-four analyses were made by THE LANCET analytical staff. The table of analyses then published showed in a striking way the chief variations in composition of almost all the kinds of biscuits manufactured. Following closely upon this was an investigation lasting over a month, into the question of Perfect Combustion and the Prevention of Smoke. The inquiry arose out of a new form of stove which our Special Commissioner in Paris had noticed. Subsequently the inventor M. DE CLAUSEN brought his stove to London, and many experiments were made with it in THE LANCET laboratory. Upwards of forty analyses of the fuel used and the products of combustion obtained were conducted, and M. DE CLAUSEN'S theories on the conditions necessary to secure perfect combustion were in a great measure confirmed and supported by our own observations. Imperfect combustion, it was alleged, is to be traced generally, not to want of air, but to the absence of a sufficiently elevated temperature; and it was thought with a sufficiently elevated temperature not only would there be no deleterious carbon monoxide produced, but no smoke or any other unburnt products of an obnoxious character. M. DE CLAUSEN'S stove, which we submitted to the most severe tests, appeared to comply with all these conditions. Not less interesting was the report of our Commissioner on Natural Mineral Waters, which appeared in an early number in August. THE LANCET Special Commissioner was despatched to the springs of the Johannis Company at Zollhaus in Germany, where, being equipped with the necessary apparatus, he was able to perform numerous analyses on the spot, not only of the water, but of the carbonic acid gas, which issues from these springs in astonishing

quantity and in a state of admirable purity. The report was read with universal interest, embodying as it did a great number of analyses of the gaseous, liquid, and solid constituents. The results went to demonstrate the great superiority of natural mineral waters over those artificially obtained; and it was shown that not only does natural gas lend a softer and more agreeable tone to the water, but the water itself is more permanently aerated. In response to invitations, a special representative was sent to inspect and report upon the main drainage works recently constructed at Richmond, the proposed spring water-supply to London from the chalk of the Colne Valley at Rickmansworth, and a curious chalybeate spring at Flitwick in Bedfordshire. This last was productive of considerable interest and curiosity. At the German Exhibition our attention was drawn to a filter made of that interesting infusorial earth kieselguhr, which, according to the tests applied in our laboratory, was ascertained to possess, as many of our readers will remember, very remarkable filtering powers. The epidemic of lead poisoning in Sheffield and other places has frequently been the subject of considerable comment in our columns, and it is satisfactory to record that a practical solution of the difficulty has this year been arrived at. Lastly, we have directed the attention of our readers in somewhat strong terms to the unsatisfactory state of the working of the Food and Drugs Adulteration Act. What we have so often complained of has received ample and striking justification in the recent issue of the returns of the analyses made under the Act during the past year. They show in the plainest manner that, in many instances at any rate, the Act is reduced practically to a dead letter. Our interest in these and all other similarly important matters has in no wise flagged, and our efforts to raise the purity of foods and drugs to a yet higher level have not been in any degree relaxed, seeing that in 1891 upwards of 400 single chemical determinations were made.

Hospital Administration.

The great question of Hospital Administration has been the subject of further investigation by the Lords Committee, who have not yet made their report. It is gratifying to record that in spite of the criticism freely and properly lavished on hospital management the public interest in hospital maintenance does not diminish, and that the amount of the Hospital Sunday Fund this year exceeds that of any previous year, and reached a sum of £45,330 13*s.* 5*d.*

Benevolent Societies.

We must not omit to mention the benevolent institutions of the profession and to appeal to our readers also not to forget the claims which these have on them and the help which they afford to the worn out and afflicted and those who fall by the way. The Society for the Relief of Widows and Orphans of Medical Men, the British Medical Benevolent Fund, and the Royal Medical Benevolent College, Epsom, all continue in their good work. Nor need we hesitate to add that THE LANCET Relief Fund (the third annual report of the almoners of which will appear in our next issue) has on several occasions during the course of the year been able to afford timely assistance to distressed members of the profession.

Honours to Medical Men.

The honours reaped during the year by the distinguished members of the medical profession have not been numerous. The conferring of the dignity of a baronetcy on Sir RICHARD QUAIN, now the President of the General Medical Council, gave much satisfaction to the profession generally. Professor GEORGE MURRAY HUMPHRY received the honour of knighthood; T. F. ODLING, Esq., was made a Companion of the Order of St. Michael and St. George; Brigade Surgeon T. E. B. BROWN and Surgeon-Major T. H. HEADLEY were made Companions of the most eminent Order of the Indian Empire; and J. D. M'CARTHY, M.D, Chief Medical Officer of the Gold Coast Colony, Commander of the Order of St. Michael and St. George of the Third Class. Director-General MACKINNON was made a Knight Commander of the Bath. He has a distinguished war service, and has been awarded a good-service pension. Brigade Surgeon ROBERT WATERS, M.D., was made Companion of the Order of the Bath. On Surgeon-Major JAMES SUTHERLAND WILKINS, of the Indian Medical Service, was conferred the Distinguished Service Order.

Obituary.

The sad change in the *personnel* of the profession wrought by the year may be estimated by the mention of a few names which have occurred in our obituary notices. The year began very badly by the death of Professor JOHN MARSHALL, F.R.S., President of the General Medical Council. The list includes many others, of which we can only mention a few, from every branch of practice. ROBERT GEE, M.D., Liverpool; THOMAS GRAHAM BALFOUR, M.D., F.R.S.; EDWARD J. WARING, M.D., who edited the Indian Pharmacopœia; Professor LEOPARDI, of Florence; RICHARD MIDDLEMORE, F.R.C.S E., of Birmingham; JOHN ALLAN, M.D., of Islington; FREDERICK WORTHINGTON, M.D., F.R.C.S. Eng.; WM. ROYSTON PIKE, M.D. Durh.; GEO. BERNARD HOFFMEISTER, M.D. Cantab.; JOHN SPEAR, M.D.; JOSHUA SOUTHWOOD, M.D.; JAMES R. LANE, F R.C.S.; Dr. FORDYCE BARKER; HENRY GAWEN SUTTON, M.B. Lond.; Sir PRESCOTT HEWETT, F.R.S.; PETER MARTIN DUNCAN, M.B.; C. E. SHEPPARD, M.D. Lond.; W. H. STONE, M.A. Oxon., F.R.C.P., F.R.C.S.; JOHN SUTHERLAND, M.D.; ROBERT MACK, L.R.C.S., L.S.A.; K. TOMSON, M.R.C.S.; JAMES HENRY BENNET, M.D.; SAMUEL CARTWRIGHT, F.R.C.S.; WHARTON JONES, F.R.S.; W. B. KESTEVEN, M.D.; W. HEMPSON DENHAM; Inspector-General FEGAN; JAKOB POLAK of Vienna; SAMUEL CHAPLIN of Kildare; E. F. BRIGHT, M.D. Lond., of Bournemouth; HENRY THURSTON BASSETT, M.B. Lond.; T. A. BARKER, M.D.; Sir RISDON BENNETT, M.D., F.R.S. These are only a few of the names in our own obituary columns, and these, again, are probably not a tenth of the deaths of our professional brethren who have "ceased from their labours." But they are typical of the whole, and they well represent the profession to which they belonged. It is refreshing and pleasant to read their lives, so full of labour, service, and fruit. Some had fully earned their rest; for some even fame could do no more. One venerable Fellow of the College of Surgeons, Mr. THOMAS TAYLOR, of Sutton Coldfield, had attained to the age of ninety-five.

He died believing firmly in three books: the works of JEREMY TAYLOR, with whom he claimed relationship; of ABERNETHY, who was his teacher in surgery; and in the Bible. Mr. HEMPSON DENHAM had been over sixty years in uninterrupted practice. Mr. TOMSON of Luton in forty-three years had attended 8000 midwifery cases, and in one year had been called up on 200 nights. Men like Professor MARSHALL, Sir PRESCOTT HEWETT, and Sir RISDON BENNETT had filled the high offices of the profession with honour. Other falls from the ranks excite different feelings—those of men, many of them distinguished graduates — we will not say of one university — men of brilliant promise, just starting on careers of credit, and abruptly lost to the profession which they adorned. We are not easily reconciled to such deaths. But for the rest they are not so untimely as many accounts of the mortality of the profession and our own knowledge of its work would lead us to fear.

> We men....must vanish; be it so!
> Enough if something from our hands have power
> To live, and act, and serve the future hour.

Conclusion.

In taking leave of our readers for the present year we do so with cheerful feelings, both as regards the retrospect and the future. The solid bases on which the medicine of the future is to rest are already being well laid. Quackeries exist in profusion. No classes seem superior to their pretensions and plausibilities. But the great remedy for them is honesty in the search for medical truth and honour in medical practice. THE LANCET will always aim at encouraging all who seek to promote these ends. Our columns are open not only to the man of research, who aims at wresting from nature the secrets of the borderland between physiology and pathology and to the hospital physician or surgeon, who has to deal with the rarer forms of disease, but to the busy practitioner, who sees disease in all its stages and in all its forms, who has to deal with it in its practical aspects, and whose "ready help" is the resource of all sections of the community. In the hope of such coöperation, we part with our readers till 1892, and wish them meantime all the blessings of the season.

Annotations.

"Ne quid nimis.'

WELLINGTON COLLEGE.

FIELD-MARSHAL SIR LINTORN SIMMONS, one of the governors of Wellington College, has written to ask us for information to aid in unravelling the mystery which environs the present and past visitations of fatal illness at the institution, the last outbreak having necessitated the dispersal of the school some three weeks before the appointed time. This information we should be quite willing to give providing the inquiry is a perfectly open one, instead of being, as heretofore, an inquiry by nominees selected by the governors alone. But if Sir Lintorn Simmons will refer to our former articles in THE LANCET, vols. i. and ii., 1884, on Wellington College, the correspondence which took place, and his own letter and the one which accompanied it, he will be able to find some clue to the mystery of the recent outbreak. While on the one hand we are quite willing to help Wellington College to the utmost of our power—and we believe we can help it,—on the other hand we cannot be a party to any method which we consider defective. As we stated at the end of a series of articles at the time referred to, "the investigation must be conducted by men entirely independent of the College, the results must be unreservedly made known, and the measures which may be deemed necessary to improve the health must be carried out as promptly as possible. Unless some such course is adopted, it can scarcely be expected that Wellington College will maintain its numbers or continue to hold the position it has attained in the public estimation as one of our great and deservedly popular public schools" (see THE LANCET, Dec. 27th, 1884). We see no reason to alter this advice, except in one particular; that is, the governors may fairly claim to be represented from among themselves on any committee of investigation, and the parents should also be represented. Sir Andrew Clark, President of the College of Physicians, who was in the first instance called in to inquire into the nature of the present outbreak, would be a valuable member; and, with some such committee, if it be the desire of his Royal Highness the Prince of Wales, the President of the College, that we should do so, we should have no objection to coöperate. A committee thus constituted could gather valuable information and seek the aid of such experts as might be thought desirable. We do not believe any other method will be successful in either abating the mischief or in regaining public confidence. The school has suffered already, and will suffer still more if this is not done.

THE ELECTRICIANS ON ELECTROCUTION.

OUR contemporaries in the electrical world are inclined to differ in opinion as well as in sentiment about the application of electricity for the carrying out of the death penalty. One weekly review of electricity is far more severe in its strictures than we have been. This journal speaks of the electrical executioners as "electro butchers," and describes the details of the new process "of electrocution" as causing such horror and disgust that nothing would induce it to reproduce into its columns the latest account. Above all, it is shocked that any electrician could be found "of so degraded a mind as to lend any hand in so loathsome a task"; and "regrets extremely that any amongst those qualifying for the pursuit of the youngest, and in many respects the most advanced of the sciences, should be found willing to put their knowledge to such a debased and debasing use." Another journal devoted to the subject of electricity, however, falls foul of us, and declares that it never accused the prison surgeons of this country of assisting the executioner on the scaffold. We are glad our contemporary makes this correction, as it will, or may, correct a false impression that was drawn from its comments; but when it accuses us of adopting a more moderate tone towards the new method of taking human life, we must affirm that we have no such intention. The later details that have been published respecting the doing to death of the wretched culprit Loppy only serve to increase our objections to the whole proceeding. From the first descriptions that were supplied we could but infer that the miserable man was stunned into insensibility by the primary shock. But the later and more minute accounts that have reached us convey, unfortunately, a different impression. It would now appear that the man showed evidences of struggle and of life after he was struck and liberated from the current; that he was so scorched and burned that the air around him became offensive to breathe; and that six minutes, with three reapplications of the current, passed by before life was declared extinct. We shall not be led away by any side issues, however

plausible they may be, from declaring our honest convictions respecting the destruction of human life and the part which it behoves every medical man to take in regard to the functions of the executioner. The field of action open to medical men is a wide one. "Each has his exit and his entrances, and one man in his time plays many parts"; but the last part to be assumed by the sons of Æsculapius is that of executioner. They of all men are sworn to save life. They risk their lives day by day, and the world looks on coldly enough even at that spectacle. The invention of the guillotine in the last century was a sufficient blow to our noble calling, and, we hope, a sufficient warning to prevent the addition of other medical names to implements or methods of death for members of the human family.

INFLUENZA AT MILAN.

THIS is the first reappearance on an epidemic scale of the influenza in Italy; and Milan, the general health of which has for some time been the reverse of satisfactory, meets the unwelcome visitor more than half way. It has already attacked all classes of the population, and especially the very young and the very old. It is not, however, the so-called "Russian influenza," nor does it strike the distinctly "neurotic" note of that malady. Febrile catarrh is its most pronounced and most unvarying symptom, declaring itself most seriously in sufferers from chronic bronchitis. The local physicians announce it as of a generally mild type, and hitherto the mortality from it has been small.

SELF-MEDICATION.

WITH the recurrence of influenza a word of warning against the possible dangers of self-medication becomes once more imperative. Many regard this affection as trivial and transitory, and requiring little more treatment than merely remaining at home for twenty-four hours or so; while they are prepared either to ignore medicine entirely, or to fly in reckless, haphazard fashion to quinine, salicin, antipyrin, exalgine, or to any substance which may be widely advertised either for the reduction of fever or the relief of pain. It cannot be too widely known that such a course is fraught with considerable danger, not only from the possibility of serious but insidious complications being overlooked until the patient is perhaps moribund, but also from the fear lest any of the newer remedies should be employed in overdoses. The most casual reference to any work dealing with the synthetic compounds will show that, as a rule, they possess toxic properties, and this fact alone should cause those addicted to self-medication to pause before they act upon the assumption that statements in an advertisement, or even in the columns of the daily press, convey the whole truth. It is true that certain drugs relieve pain and reduce temperature, but it is equally true that, unless they are employed by persons who are properly informed, disastrous accidents will undoubtedly occur.

THE RESTRICTION OF THE OPIUM TRADE.

MOST of our readers will by this time have received a circular issued by several members of the profession—namely, Mr. William Lockhart, Drs. R. Pringle, Gauld, and Maxwell, soliciting their influence in pressing upon Government the limitation of the Indian opium trade. In order to secure this object, they propose that the drug should no longer be cultivated and sold for mere purposes of revenue, but as a poison and for medicinal use only. In the course of succeeding observations, they show that the opium traffic, which is simply a monopoly under Government control, has not only flooded the Chinese market in the past, but, now that increasing home production is restricting its spread in that country, has grown to formidable dimensions in India itself. Proof of this is furnished by the fact that between 1856 and 1889 the revenue derived from opium sold in India has increased more than sixfold; while the number of shops licensed for the sale of this drug now amounts to 10,417. These shops, which are virtually opium public-houses, are licensed under a penalty not to sell less than a certain amount of duty-paid opium. Thus the licensee is under an obvious necessity to push the sale of the drug in the Government interest and his own. Opium is very cheap, and the habits of smoking and eating it have greatly developed, and are yearly becoming more prevalent. Its frequent association with acts of suicide and murder, we are told, is undeniable, nor is this remarkable in face of the facts above stated. There is no doubt that public opinion in this country is, on the whole, strongly opposed to the promiscuous sale and use of the drug. This attitude is most reasonable, and the resolution already quoted, which would have it employed only medicinally, assigns to it no other than its rational position. We have all along advocated this view of the question, and we still do so. It is not long since a Parliamentary majority decided against the justice of continuing the traffic under present conditions. As regards its moral and social side there can, indeed, be no question. The reluctance of Government to proceed further in the matter is solely due, of course, to considerations of revenue. Important these may be, but it remains to be proved whether they cannot be met by other methods and resources still unused. The circular already mentioned is concerned with the questions of public health and public duty only, and its views in this regard will, we feel sure, command the support of the medical profession.

SHABBINESS IN SANITARY AUTHORITIES.

IT is pitiable to see another of the sanitary authorities of Scotland begrudging the fees accruing under the Notification Act to the medical man. This time it is the Dalkeith Commissioners, who made a wry face over the payment of £9 17*s.* 6*d.* to a doctor who had reported many infectious cases. The authorities wish to have the benefit of the Act. Why not pay for it with graciousness? Mr. Urquhart said there was no alternative but to pay, and the Commissioner submitted.

HYOSCYAMINE IN LETTUCE.

ALTHOUGH lettuce has been used in medicine from early times as a sedative, the active constituent has never until now been with certainty determined. In a paper read before a recent meeting of the Chemical Society, Mr. T. S. Dymond explained that the mydriatic action of an extract of lettuce used in medicine to which his attention had been drawn was due to an alkaloid. Commercial specimens of the extract of wild lettuce, and of the variety of the edible plant known as cos lettuce, obtained from three different sources, together with a specimen of the dried flowery plant of wild lettuce, were all found to contain this alkaloid. On suitable treatment, the alkaloid, recovered and crystallised from chloroform, was obtained in silky needles, having the same melting point and other properties as hyoscyamine—the poisonous mydriatic alkaloid existing in belladonna, henbane, and other plants belonging to the natural order *Solanaceæ*. The determination of the gold and the alkaloid in the aurichloride which it yielded afforded results corresponding with the formula of hyoscyamine aurichloride $C_{17}H_{23}No_3HAuCl_4$; and the amount of hyoscyamine in the extract of common lettuce does not exceed 0·02 per cent., while in the flowery plant it cannot be more than 0·001 per cent. It appears probable that this is the first occasion on which hyoscyamine or any other alkaloid belonging to that mydriatic group has been

found in a plant not a member of the natural order *Solanaceæ*, lettuce belonging to the natural order *Compositæ*. Professor Dunstan, in his remarks following upon the reading of the paper, pointed out that it had been known from the time of the Greeks that lettuce had a soporific action, and, as Ladenburg and others had shown hyoscyamine to be a soporific, it was now possible for the first time to explain an ancient Greek practice.

PROFESSOR STRUTHERS AND THE MEDICAL COUNCIL.

THE resignation of Professor Struthers having been officially confirmed, we cannot forbear to express our editorial regret. There was a decidedly combative vein in the nature of the Aberdeen professor, which occasionally took the form of treading on his opponents' corns. But that is a small matter compared with his many virtues as a man and his large experience and enthusiasm as a teacher. There was, besides, his industry and devotion as chairman of the Education Committee of the Medical Council, shown conspicuously in recent sessions in the unstinted work he imposed on himself of placing before the Council the systems of education in force in other European countries. For such services and qualities he will always be remembered in the Council with respect, and his resignation will be received with reluctance. We venture to believe that he, too, will miss the pleasure of the duties of the Council. But he is to be congratulated on being a man of resources, and on the retention of that health which will make the future of life still a joy and a pleasure to him. Dr. Angus Fraser has been duly appointed as successor to Professor Struthers.

THE CORONERSHIP OF THE CITY OF LIVERPOOL.

IT is with regret that we have to record that Liverpool is hopelessly tied down to the old traditions concerning attorney coroners. The council has chosen to confer the office, as the *Liverpool Mercury* puts it, on the "nominee of a Conservative caucus," by an extremely narrow majority. It is most unfortunate that such an appointment should turn, even in the most remote manner, on political considerations. Meanwhile we may congratulate Mr. F. W. Lowndes on having fought a good fight from a higher standpoint. He received no less than twenty-two votes on this occasion, the first in Liverpool on which a medical candidate has ever been mentioned. He has succeeded in breaking the ice, and the result of his candidature will no doubt be that the subject of medical coroners will hereafter be better known and understood in Liverpool than it is now, and impatience need not be manifested even at the grounds which, in this instance, formed the basis of the election.

REPORTS OF CHARITIES IN NEW SOUTH WALES.

THE annual report of the State Children's Relief Department of New South Wales for the year ending April, 1891, contains a number of instructive particulars respecting the condition of destitute children in that colony. On the date above mentioned there were 2369 children under the control of the department, most of these being boarded out at a net average cost per annum of £13 16*s.* 8*d.* each—a moderate cost certainly. It is satisfactory to learn that the now fast-extending boarding-out system has resulted in a saving of about £15,000 per annum as compared with that of aggregation in asylums. Health and moral character have been on the whole satisfactory under the new arrangement, and the report contains a gratifying allusion to the consideration paid by visiting medical practitioners to these poor children. The conduct of foster-parents has, with very few exceptions, been satisfactory, and the work of official inspection has been effectively discharged, though voluntary oversight, an important part of the system, has been somewhat lacking. On the whole, therefore, the statistics of boarding out have once more justified the continuance of this method; cottage homes for invalid children have served their purpose well. Another report relates to the condition of asylums for destitute and infirm adults. We are interested to learn that in these the services of a few trained nurses have been sanctioned as necessary, and that this useful innovation has well stood the test of experience. Some observations on diet are interesting. In this connexion, we note that a plain, sufficient, and wholesome dietary, without stimulants, has been associated, even in the case of elderly persons, with a lower death-rate than was noted under an alcoholic regimen. Further particulars of internal management give evidence of thrift and foresight. A table of suggested legislative changes will repay perusal. Both reports may be recommended to the attentive study of parochial authorities, and any others who claim an interest in their work.

THE LATE MR. PETER TAYLOR.

THE death of Mr. Peter A. Taylor at the ripe age of eighty-two is a noticeable event. He never took a very friendly view of the profession, and his antipathy to vaccination was a craze. He is understood to have been the principal support of that strange movement for which Leicester will have to pay heavily some day, and for which it would have to pay very soon if it had the courage of its opinions and dared to dismiss the staff of vaccinated and revaccinated persons who now receive and attend small-pox patients, and stand between them and the community, and who revaccinate all exposed persons. A correspondent estimates that he spent £1300 a year on his fad.

ACETONURIA IN THE INSANE.

DRS. BOECK and SLOSSE, who have been engaged in examining the urine of insane patients for acetone, remark that great care must be employed in the collection of the urine; the flasks must be absolutely full and efficiently stoppered, or, better still, the distillation should be commenced immediately. Lieben's iodoform reaction was found to be the most suitable one for indicating the existence of minute quantities of acetone. Gunning's test may also be used, and if these two give negative results, all others are superfluous. The perchloride of iron test is useless for acetone, but is characteristic of diacetic acid. Acetone may exist in the urine under physiological conditions; its importance depends upon the quantity of nitrogen in the food. A small quantity, therefore, in the urine of insane patients is of no importance whatever. The amount did not appear to have any relation to the mental state of the patient—that is to say, to the existence of such conditions as depression, excitement, fear, or delusions. The quantity of acetone increases considerably when the body is in a state of inanition. It is a good plan, according to Drs. Boeck and Slosse, to commence artificial feeding when a patient who will not eat passes urine containing a large proportion of acetone.

THE HEALTH OF THE POPE.

AN Italian correspondent writes:—"On the evening of Thursday, the 17th inst., the Holy Father had a fainting fit, the result of the great fatigue he had undergone at the Consistory, which he had opened at 7 o'clock that morning. His medical advisers were promptly in attendance; he soon rallied, but his strength had so far left him that he remained for several hours in extreme prostration. As to his general health, there is little to add to what, on the best authority,

I was enabled to send to THE LANCET of Aug. 15th of the present year. The chronic intestinal catarrh from which he suffers is prone to take an acute turn in the severely cold weather we have been having; while the senile anæmia, which causes his physicians still greater anxiety, is always more pronounced after such exertions as those which preceded and accompanied the last Consistory. The fainting fit above referred to was kept a profound secret, in compliance with orders imposed on the *personnel* of the Vatican, according to which, in the event of the Pope's decease, the fact remains undivulged till the cardinals present in Rome have completed certain acts preliminary to the conclave—acts prescribed by a secret bull lately issued by Pope Leo himself."

HOSPITAL SUBSCRIPTIONS v. CHRISTMAS PRESENTS.

"AN earnest but critical friend of hospitals" has sent £20 to help in the erection of "new buildings" for one of our ophthalmic hospitals, a sum which he would otherwise have spent on Christmas presents after puzzling himself how to do it. He means to notify to all disappointed and expecting friends his departure from the conventional custom. We are sorry for these friends. Cannot both things be done with a little *self*-denial? If not, the greater thing we believe to be the gift to the hospital.

INFLUENZA.

THE epidemic of influenza is declining in Edinburgh and other parts of Scotland; but it is still prevalent in the north of England, and also in Devonshire and in South Wales. It may be noted that the general mortality rate in all the towns mentioned last week fell during the week ending Dec. 19th. In Plymouth there was the remarkable diminution from 45·1 to 19·8. In Wolverhampton it fell to 31·5; in Newcastle-on-Tyne to 32·8; in Cardiff to 28·8. The rate in London last week was only 17·9, but the number of deaths directly attributed to influenza rose to 17, or double the number of the preceding week, and the highest recorded during the present epidemic. Influenza is still very prevalent in Vienna, among the sufferers being Professor Billroth, and in some of the other principal cities abroad.

THE ILLNESS OF PRINCE GEORGE OF WALES.

WE are glad to be able to state that Prince George has been able to leave his bed since Monday last, and that he is now taking solid food. His progress to complete recovery has been quite uninterrupted; he has gained strength with unusual rapidity, and is altogether in a state of very satisfactory convalescence. It is expected that he will leave town in the course of next week, but the locality to which he is to be removed has not yet been determined upon.

HOSPITAL FESTIVITIES.

WE venture to believe that there is no fear of the inmates of our hospitals being overlooked on Christmas Day. It is astonishing what an innate faculty there is for Christmas pleasure even in hospital patients, and what a large proportion of them can enjoy the introduction for the day into their severer diet of a sensation of the pleasures which the well-to-do and the healthy so much prize. Of course the hospital managers can accord such pleasures only in the degree in which the means are put at their disposal, but there should be no lack. It was the "beloved physician" that put on record that memorable picture of Lazarus full of sores, and pining for crumbs at the gate of the rich man. No hospital physician in the Christian England of to-day will have to record such cases, and we fondly believe no dispensary physician. Such a picture would be an anachronism and an accident. But even so let it not occur.

DR. FANCOURT BARNES has been elected Foreign Corresponding Member of the Obstetrical and Gynæcological Society of Paris.

HER MAJESTY THE QUEEN has renominated Dr. William Moore to be for five years, from January 25th, a member of the General Council of Medical Education and Registration of the United Kingdom for Ireland.

DR. H. D. ROLLESTON has been appointed Lecturer on Pathology in St. George's Hospital Medical School. He succeeds Dr. Delépine, who has recently been elected Professor of Pathology at Owens College.

THE death has been announced of Dr. Mess, municipal physician of the bathing establishment of Scheveningen. The deceased was Knight of the Order of the Lion of the Netherlands, and bore several other honours of a similar kind.

MR. E. RAY LANKESTER, Deputy Professor of Human and Comparative Anatomy, has been elected to the Linacre Professorship of Human and Comparative Anatomy, Oxford, vacated by the death of Professor Moseley.

THE Lettsomian Lectures will be delivered at the rooms of the Medical Society of London on Jan. 4th and 18th and Feb. 1st by Professor William Rose, M.B., F.R.C.S Eng., who will take as his subject the Surgical Treatment of Trigeminal Neuralgia.

A sum of £5000 has just been bequeathed to the London Hospital Medical College for the purpose of founding scholarships by the late Dr. H. E. Price of Brighton. Dr. Price was an old student of the College. The bequest is free of duty, and Dr. Langdon Down (an uncle of the testator and consulting physician to the hospital) is one of the trustees.

AT a meeting of the Governors of the Royal Veterinary College, held on the 18th inst., under the presidency of Colonel Sir Nigel Kingscote, K.C.B., a recommendation from the General Purposes Committee was submitted, and unanimously adopted, appointing Professor McFadyean, F.R.S.E., M.B., B.Sc., C.M., M.R.C.V.S., Dean of the College and Professor of Pathology and Bacteriology. Professor Macqueen, F.R.C.V.S., was also appointed to the Professorship of Cattle Pathology. It was announced, in connexion with the recent celebration of the centenary, that Her Majesty the Queen had graciously consented to be Patron of the College, and had also become an annual subscriber to the funds of the institution.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN twenty-eight of the largest English towns 5891 births and 3440 deaths were registered during the week ending Dec. 19th. The annual rate of mortality in these towns, which had been 22·6 and 19·8 per 1000 in the preceding two weeks, further declined to 19·1 last week. The rate was 17·9 in London and 20·0 in the twenty-seven provincial towns. During the first eleven weeks of the current quarter the death-rate in the twenty-eight towns averaged 19·6 per 1000, and was 1·4 below the mean rate in the corresponding periods of the ten years 1881–90. The lowest rates in these towns last week were 10·8 in Nottingham, 11·7 in Portsmouth, 12·5 in Halifax, and 13·6 in Huddersfield;

the highest rates were 28·8 in Cardiff, 30·6 in Sunderland, 31·5 in Wolverhampton, and 32·8 in Newcastle-upon-Tyne. The deaths referred to the principal zymotic diseases, which had been 478 and 402 in the preceding two weeks, further declined last week to 398; they included 132 from whooping-cough, 106 from measles, 47 from diphtheria, 46 from "fever" (principally enteric), 39 from diarrhœa, 28 from scarlet fever, and not one from small-pox. No fatal case of any of these diseases was registered in Halifax; in the other towns the lowest zymotic death-rates were recorded in Blackburn, Brighton, and Leicester; and the highest rates in Liverpool, Manchester, Cardiff, and Newcastle-upon-Tyne. The greatest mortality from measles occurred in Birkenhead, Norwich, Newcastle-upon-Tyne, Sunderland, Cardiff, and Wolverhampton; from whooping-cough in Sheffield, Manchester, Leeds, and Newcastle-upon-Tyne; from "fever" in Norwich and Preston; and from diarrhœa in Cardiff. The mortality from scarlet fever showed no marked excess in any of the twenty-eight towns. The 47 deaths from diphtheria included 30 in London, 4 in Manchester, 3 in Derby, 2 in Liverpool, 2 in Preston, and 2 in Newcastle-upon-Tyne. No fatal case of small-pox was registered in any of the twenty-eight large towns; one small-pox patient was under treatment on Saturday last in the Metropolitan Asylum Hospital at Dartford, but not one in the Highgate Small-pox Hospital. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of the week was 1489, against numbers increasing from 947 to 1555, at the end of the preceding fifteen weeks; 109 new cases were admitted during the week, against 166 and 137 in the previous two weeks. The deaths referred to diseases of the respiratory organs in London, which had been 449 and 348 in the preceding two weeks, further declined last week to 337, and were as many as 140 below the corrected average. The causes of 74, or 2·2 per cent., of the deaths in the twenty-eight towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Leicester, Salford, Oldham, Cardiff, and in four other smaller towns; the largest proportions of uncertified deaths were registered in Birmingham, Liverpool, and Hull.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 32·2 and 30·6 per 1000 in the preceding two weeks, further declined to 26·0 during the week ending Dec. 19th, but exceeded by 6·9 the mean rate that prevailed during the same period in the twenty-eight large English towns. The rates in the eight Scotch towns ranged from 21·0 in Paisley and 23·4 in Aberdeen to 34·2 in Leith and 35·5 in Perth. The 669 deaths in these towns showed a decline of 118 from the number in the preceding week, and included 12 which were referred to whooping-cough, 11 to scarlet fever, 11 to diarrhœa, 6 to measles, 6 to "fever," 4 to diphtheria, and not one to small-pox. In all, 50 deaths resulted from these principal zymotic diseases, against 57 and 59 in the preceding two weeks. These 50 deaths were equal to an annual rate of 1·9 per 1000, which was 0·3 below the mean rate last week from the same diseases in the twenty-eight English towns. The fatal cases of whooping-cough, which had been 13 and 18 in the preceding two weeks, declined last week to 12, of which 8 occurred in Glasgow and 3 in Aberdeen. The deaths referred to scarlet fever, which had increased from 4 to 9 in the preceding three weeks, further rose to 11 last week, and included 5 in Glasgow and 4 in Edinburgh. The 6 fatal cases of "fever" were within one of the number in the preceding week. The 6 deaths from measles corresponded with the number in the previous week, and included 5 in Glasgow. The fatal cases of diphtheria, which had been 8 and 12 in the preceding two weeks, declined again last week to 4, of which 2 were recorded in Glasgow. The deaths referred to diseases of the respiratory organs in these towns, which had been 331 and 297 in the preceding two weeks, further declined last week to 246, but exceeded by as many as 107 the number in the corresponding week of last year. The causes of 63, or more than 9 per cent., of the deaths in the eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 34·7 and 25·2 per 1000 in the preceding two weeks, rose again to 33·9 during the week ending Dec. 19th. During the past eleven weeks of the current quarter the death-rate in the city averaged 28·5 per 1000, against 18·4 in London and 25·8 in Edinburgh. The 226 deaths in Dublin during the week under notice showed an increase of 58 upon the number in the previous week, and included 7 which were referred to different forms of "fever," 6 to diarrhœa, 4 to whooping-cough, and not one either to small-pox, measles, scarlet fever, or diphtheria. In all, 17 deaths resulted from these principal zymotic diseases, equal to an annual rate of 2·6 per 1000, the rate during the same period being 2·3 in London and 1·6 in Edinburgh. The fatal cases of "fever," which had been 7 and 11 in the preceding two weeks, declined again to 11 last week. The 6 deaths referred to diarrhœa showed a slight further increase upon recent weekly numbers. The fatal cases of whooping-cough, which had been 2 and 3 in the previous two weeks, further rose to 4 last week. The 226 deaths registered in Dublin included 50 of infants under one year of age, and 74 of persons aged upwards of sixty years; the deaths both of infants and of elderly persons considerably exceeded those recorded in the preceding week. Six inquest cases and 5 deaths from violence were registered; and 67, or nearly a third, of the deaths occurred in public institutions. The causes of 23, or more than 10 per cent., of the deaths in the city were not certified.

THE SERVICES.

ARMY MEDICAL STAFF.—Surgeon-Major A. E. Hayes, D.S.O., is vacating his appointment in the Egyptian Army.

INDIAN MEDICAL SERVICE.—*Bengal:* Surgeon-Lieutenant-Colonel Cornelius John McKenna (dated Dec. 16th, 1891).

NAVAL MEDICAL SERVICE.—The following appointments have been made at the Admiralty:—Staff Surgeon William Thompson to the *Himalaya*. Surgeons: John Lowney to the *Hearty*, and George Edmunds to the *Seagull* (both dated Dec. 18th, 1891).

VOLUNTEER CORPS.—1st Volunteer Battalion, the South Staffordshire Regiment: Surgeon-Captain H. H. Smith to be Surgeon-Major (dated Dec. 19th, 1891).—5th Volunteer Battalion, the Princess Louise's (Argyll and Sutherland Highlanders): Surgeon-Captain D. Campbell to be Surgeon-Major (dated Dec. 10th, 1891).

Correspondence.

"Audi alteram partem."

ANÆSTHETICS.

To the Editors of THE LANCET.

SIRS,—Whatever may have been the real effects of the Report of the so-called Hyderabad Commission, of this there can be no doubt, that it has not succeeded in solving many of the very difficult and intricate problems associated with the administration of anæsthetics, and the uncertainty existing in men's minds upon this subject has recently found expression in the appointment of yet another committee of investigation for the purpose of inquiring more particularly into the clinical aspect of this question. But few will doubt the wisdom of this course, and no one, I presume, but will wish the committee every success. There are, however, one or two points to which I should like to direct attention.

1. *The Constitution of the Committee.*—How is it that in a committee of twenty-one members there are only two who hold official posts as anæsthetists to hospitals? Surely our hospitals are great sources of clinical investigation, and equally surely the anæsthetists of the several hospitals are in as good positions to obtain the requisite information as the respective surgeons. It is not exactly "the play of 'Hamlet' with the title *rôle* omitted," but it certainly appears to be that performance with the part of Hamlet played by the stage carpenter or general utility man. Further, from the general committee five members have

been selected to form an executive committee. Accepting the terms "general" and "executive" in the way they are usually used in this connexion, it is to be presumed that the functions of the former will practically be to criticise, accept, reject, or modify the report presented by the latter; yet on the general committee, excluding the five members alluded to, there is no anæsthetist, while even on the executive committee the anæsthetists are still in the minority.

2. *As to the scope of the inquiry.*—I regret to see that, in the terms of the reference to the committee, no special allusion is made to the desirability of teaching anæsthetics, and although the committee has itself filled the hiatus, yet I hardly think such prominence has been given to this aspect of the question as its importance demands. I have myself long been of opinion that, by teaching thoroughly what we do know about anæsthetics, we shall be much more likely to obtain really practical results than by seeking panaceas for the lamentable death-rate, either in the field of clinical observation or in that of physiological research.

3. *The methods adopted.*—So far the committee appear to be seriously afflicted with the "fallacy of figures," and have requested, in a very curious manner, that the various hospitals shall hand over to the committee, to be used practically as the latter think fit, a whole year's records of anæsthetic work. I cannot think that such a proposition will commend itself either as a practicable or as a proper one to the hospital authorities, nor do I think that the figures thus obtained are likely to be accurate or to represent in any way the actual amount of anæsthetic work done in the various institutions; and, further, I think that these figures are less likely to be reliable the larger the hospital at which they are obtained.

I am loth to assume the ungracious task of criticism, and if I were not myself extremely anxious for the success of this investigation I should not have troubled you with these remarks. As it is, however, I feel that I am doing the cause a service rather than the reverse by pointing out objections at a time when they are not beyond correction.

I am, Sirs, yours truly,

J. FREDK. W. SILK,

Assistant Anæsthetist to Guy's Hospital &c.

Weymouth-street, W., Dec. 21st, 1891.

NEW COLONIAL MEDICAL COUNCIL AND PHARMACY BOARD, CAPE COLONY.

To the Editors of THE LANCET.

SIRS,—I beg to enclose a clipping from the Government Gazette of this colony, dated Oct. 23rd, 1891, giving the result of the nominations and elections to the new Colonial Medical Council and Pharmacy Board,[1] and at the same time to draw your attention to the following points:—Firstly, the result, so far as the elected members go, would have been very different but for the very short period allowed between the first official notice and the closing of the poll; indeed, in some cases—medical practitioners residing in remote districts—no knowledge of the coming election was ever received by them, and some others seldom receive or consult the dry Government notices in the Gazette. Secondly, you will observe that the Royal College of Surgeons gets one nominated representative, the Dublin University another, and a Continental university another, whereas the University of Edinburgh claims the whole of the elected members. The dates of the various members' diplomas range from 1868 to 1887. The whole of the members reside either in Cape Town or its suburbs.

The great grievance during the existence of the "old Medical Board" was that rural districts had no representation or voice in medical matters, the whole of the Board being constituted of "Cape Town and suburban medical practitioners." Recent events have not altered this state of things, which, I say, is due to the cause stated above. It was easy to rush the Cape Town and suburban practitioners; but it would take considerable time and money to organise successfully the widely scattered country practitioners; consequently, things being left, each district almost had its candidate without its neighbour's knowledge until too late. However, foreseeing what might happen, directly the Government notice appeared, I telegraphed to the *Cape Argus*, the local leading paper, that the effect would be to exclude all chance of returning a rural candidate against the Cape Town combination, but without effect. Probably the wire-pullers pooh-poohed my intimation. The *personnel* of the New Medical Council leaves some hope that our voices may find a response in case of need. In the next place, I beg to inform you that there are already grave rumours of serious defects in the Act you so ably criticised a short time since. Perhaps the Council will move Government to introduce improvements or amendments to remedy the alleged shortcomings. It appears that Sect. 35 is the only one dealing with irregular practitioners; on the other hand, the body of these gentlemen do not wilfully and falsely pretend to be, or take or use the name or title of, a physician, doctor of medicine, surgeon, &c., or any name, title, addition, or description implying that they are licensed or registered under this Act, nor do they practise as medical practitioners. These irregular doctors call themselves (the Europeans) simply missionaries, traders, farmers, store-keepers, and hospital sergeants; it is the public that calls them doctors. It is amusing to hear, for example, an orderly of the Cape Mounted Rifles address a hospital sergeant in medical charge of an outlying station: "If you please, doctor, the commanding officer wishes to see you;" or a *private* patient address him as "Please, doctor, my wife is sick and wants to see you," &c. It is a sort of courtesy title emanating from the public. If individual persons are spoken to on the subject they tell you that they know that these people are not regular doctors, but that they are just as clever &c. Well, these irregular practitioners of medicine and surgery may be traced from inside the walls of the Cape Parliament Houses to the Kafir huts in the wilds of Africa. Is the legislator born who dares to bring in a Bill for dealing with these ignorant, wholesale irregularities? It is more than his seat would be worth to him. Perhaps you are not aware that we are mostly relations here, from the whitest down to the blackest, coffee-coloured and brown included. The native doctorings include witchcraft in all its diabolical forms. This irregular practitioner uses no false colours, calls himself "a native doctor," but there is no law to touch him except he commit some excesses amounting to assault. There is an ordinance applying to certain territories outside the colony proper, but no law in the colony. I will give you two examples:—1. The European irregular practitioner: I have seen a case of necrosis of the ulna kept under the treatment of a missionary for a year or more, until the lad entirely lost the use of his arm, yet the parent was satisfied that all had been done that could be done for her child. Such is the simple faith of these feeble races in the "man missionary." 2. The native irregular practitioner: I have seen the head, face, neck, shoulders, breasts, chest, and arms flayed by means of hot fat being blown through a reed, then through the flame of a torch on to the parts named. Can greater torture be imagined? All this for what? To frighten out of the supposed sick woman's body a mermaid supposed to have been put inside the patient by one of her enemies! Lastly, the Bill does not deal with nostrums or the vendors or prescribers of nostrums, or the sale of dangerous drugs under the garb of "Dutch medicines." There is now no protection against the sale of any remedy introduced by any layman, be he black or white.

I am, Sirs, yours truly,

J. CARTWRIGHT REED, M.D.

Herschel, Cape Colony, October, 1891.

[1] See THE LANCET of Dec. 12th, p. 1353.

WELLINGTON COLLEGE.

To the Editors of THE LANCET.

SIRS,—My attention has been called to an article in your issue of the 5th inst., in which, with reference to the recent outbreak of infectious illness among the boys at Wellington College, it is stated that some of the defects of the institution are perfectly well known to you, and that, although attention has been directed to them in your columns, they have been systematically ignored. Being one of the governors of Wellington College, and therefore most anxious to exert any influence I may have in getting all sanitary defects removed, I shall be greatly obliged if you will inform me of those to which you allude as being known to you, with a view to their being brought to the attention of the well-known sanitary

authorities who, at the request of the governors, are making a full inquiry into the condition of the College and its surroundings. I may add that I appeal with confidence to you for this information, not only in the interest of this great public school and national monument, but also in that of the parents and relatives of the boys who are being educated in it, who are naturally much alarmed that there should be well-known defects which have been systematically ignored. The names of the gentlemen who, at the request of the governors, are making inquiry into the sanitary condition of the College and its surroundings are Mr. Baldwin Latham, C.E., Dr. Bristowe, M.D., F.R.S., Mr. Rogers Field, C.E., and Dr. Woodford, the local officer of health.

I am, Sirs, yours truly,
J. L. A. SIMMONS, Field Marshal.

Cornwall-gardens, S.W., Dec. 19th, 1891.

*** In reference to the above letter, we refer Sir Linton Simmons to an annotation printed on p. 1462 of our present issue.—ED. L.

THE DISTOMA CRASSUM.

To the Editors of THE LANCET.

SIRS,—Under the heading, "A Rare Parasite," which appeared in the *British Medical Journal* of Dec. 5th, 1891, the following statement is made: "It was first found by Buck in 1843 in the duodenum of a Lascar who had died at the Seamen's Hospital. In 1873 Kerr, in Canton, met with two cases, and between 1873 and 1878 Cobbold had three cases under observation—a missionary and his wife and child, from Ningpo, China. *Dr. Walker's cases are the only others on record as far as we can ascertain.*" Out of justice to myself, I beg to draw your attention to my paper on beri-beri which was read at the British Medical Association meeting at Leeds in 1889, and to Dr. Ernest H. Jacob's letter which appeared in the *British Medical Journal* of Dec. 12th, 1891. At the Leeds meeting I also exhibited specimens of distoma and reported the case in which it occurred. This MS. report was handed by my brother, Dr. J. E. Sinclair, to you during the last quarter of 1889, and you then promised to publish it, but I have not noticed it in your columns, and I have no other record of it. The specimens of distoma were divided between the Leeds Medical School and the University of Edinburgh. I have already forwarded to you a copy of my "Notes on Beri-beri as observed in the Malay Peninsula from 1882 to 1888," which will give you more accurate information.

I am, Sirs, yours truly,
South Petherton, Dec. 22nd, 1891. A. W. SINCLAIR.

*** Our correspondent will see that we insert in another column an abstract of his paper on beri-beri, and that mention is there made of the discovery of the fluke.—ED. L.

TREATMENT OF ENTERIC FEVER.

To the Editors of THE LANCET.

SIRS,—If Mr. Herring will kindly refer to my former communication in the second volume of THE LANCET for 1885—Sept. 16th I think the date is—he will obtain the particulars asked for in your issue of the 12th inst. Perhaps you will allow me to state that the outbreak in 1889 was the last of several others that occurred in different parts of the division during the last seven or eight years. The fever was first imported into our division from the neighbouring one of King William's Town, where it existed and played sad havoc both there and in the adjoining territory of the Franskei, after the Kafir war of 1877. The epidemic has now, I am happy to say, disappeared from the district by the inhabitants getting "salted," to use a colonial expression, although I have known patients taking it a second time, and on one occasion a third seizure was noted, but in each instance the attacks were milder in character. I jotted down pages of interesting facts; many, I believe, have already been recorded, and it would be useless to repeat them here. One point generally observed was the appearance of an outbreak after a heavy rain. The stools of patients were seldom destroyed or buried, but simply thrown on the ground some distance from the homestead. The germs got washed into the sources of the water-supply, and infected the inhabitants directly or through the milk-supply. The cows drinking the infected water did not, at all events, appear to suffer from the presence of the germs in their blood, but that they contaminated the milk is indisputable. The better class of people who used rain water instead of river water, and boiled their milk, enjoyed a complete immunity from infection, while others who neglected the latter precaution got attacked, but after the milk was boiled the disease did not spread to the other members of the household.

Another point worth mentioning was the certainty with which a visitor coming to an infected area was smitten down. One gentleman who had already suffered from the disease in Germany years before, took it after a short stay in our town. I had grave doubts from past experience as to the value of alcohol in the treatment, and in this particular case I was convinced that he did better without it. The patient's house adjoined my own, and I was able to see him frequently, and note the changes in his condition after the brandy was given. I have already stated that I never prescribe it in any case of typhoid fever now, and I should say that a few teaspoonfuls of hot milk given in the typhoid collapse acts like a charm, and nothing better, in my opinion, can be ordered. Cases occurred with the most diverse symptoms. But the most unusual one of all was the case of a boy whose face and body were covered with a vesicular eruption, not unlike chicken pox. The other symptoms were perfectly typical.

I am, Sirs, yours faithfully,
Aberdeen, Dec. 14th, 1891. J. C. PEARSON.

"ACUTE RHEUMATISM AND THE TEMPORO-MAXILLARY ARTICULATION."

To the Editors of THE LANCET.

SIRS,—Misstatement of an opponent's argument is a weapon not unknown amongst controversialists. When you have exposed (what you represent to be) the errors of his premisses, it is a small matter to upset his conclusions. This is what Mr. Flemming has—no doubt unintentionally—done in your issue of the 5th inst. with regard to my letter dealing with this subject. He says he fails to see the logic of my argument, which, according to him, is "that because the temporo-maxillary joint is often affected with rheumatoid arthritis, and even with rheumatic arthritis, therefore it alone can never be affected with acute rheumatism." Now, Sirs, I am not so unreasonable as to insist upon his seeing the logic of an argument of which I never made use, and which I quite agree with him in thinking ineffectual. Mr. Flemming's misconception arises from his supposing that he sees a generalisation which he considers wrong being made where none was intended. But when in a very large number of observations a particular appearance is conspicuous by its presence, the observer is surely entitled to suggest that the circumstances he has noted as common to all, or the vast majority, are not purely the result of chance. Nay, if he goes further and suggests that a reasonable inference may be drawn from what he has noted, it would, indeed, be a relapse to pre-Baconian prejudices to assert on that account that he is making an unwarranted use of his observations. Let me point out another windmill at which Mr. Flemming tilts with great vigour. He asks, "Why should that joint be affected alone?" Well, admitting for argument's sake that the question as stated is relevant to the present issue, my attitude in relation to it must be that of the "Six Hundred"—"Mine not to reason why." I merely state a phenomenon, or better, perhaps, a clinical observation—viz., "that when the temporo-maxillary joint is affected it is in cases where chronic rheumatoid arthritis is the cause, and that the rheumatic element is absent. It is simply what we have found to be the case; therefore it is not for Mr. Flemming or anyone else (unless they can count their cases by hundreds as we can) to say that it does not happen. It is not for us to say why certain things should or should not happen, as Mr. Flemming seems to think. We state that such and such a thing is so; let others find out the reasons if they like and if they can. It is useless for Mr. Flemming to assert that "we might just as well say that the great toe joint could not be affected with rheumatism because it is generally affected by gout." But I would reply to this that "the great toe-joint is more often affected *solely* with gout than with rheumatism." If Mr. Flemming admits this (as of course he must), will he not admit that it is the *comparative* degree, because the great toe-joint is *comparatively* seldom affected with rheumatism (not *positively*, mark!), therefore *superlatively* considered the temporo-maxillary joint is *never*. To put it more

plainly: Because the great toe-joint shows more *tendency* to be affected with gout than rheumatism—whatever may be the cause—regarded from the same standpoint, cannot the temporo-maxillary articulation show a *complete* tendency to be affected from chronic rheumatoid arthritis?

No cause has as yet been assigned for the predilection of one joint than another (beyond those given by ourselves), but that there is a predilection who can deny? Very well. (1) If one disease attacks joints indiscriminately (and this is proved by acute rheumatism), and (2) it is admitted that the same disease when only attacking *one* joint very frequently does *not* select the great toe-joint (this, I think, all will admit), (3) for the same reason as No 2 the temporo-maxillary articulation is a still more highly favoured joint than the great-toe, in so far as rheumatoid arthritis is concerned, and is still further exempt from the peculiar poison of rheumatism. In tabulating the results of over three thousand cases, I have not sought to explain in detail the causes to which peculiar conditions in each or in all are due, and am satisfied if by the observations referred to I have in any way simplified the labours of any inquirer who may desire to grapple with this highly important, yet totally distinct branch of research.

Perhaps I have written enough to show that Mr. Flemming has entirely missed the point of my former statements, and that (in the somewhat inconsiderate attack) he has chosen to battle with a chimera of his own creation instead of an error of mine.—I am, Sirs, yours truly,

HUGH LANE,
Surgeon to the Royal Mineral Water Hospital, Bath; Hon. Medical Officer to the Royal United Hospital, Bath.

Dec. 19th, 1891.

THE CORPUS LUTEUM.

To the Editors of THE LANCET.

SIRS,—In cases of prosecution for criminal abortion most important consequences are associated with the question of the value of the corpus luteum as a proof of pregnancy. Let me illustrate by an example. Some years ago the uterus, Fallopian tubes, and ovaries of a young woman were submitted to me for examination, to decide whether they indicated the existence of early pregnancy or not. The case was a common one in most respects. If the medical evidence decided that the young woman was pregnant, a criminal charge would be brought against a medical practitioner for having seduced her and caused her death by abortion. The medical gentlemen engaged by the coroner to make the post-mortem examination stated to me that circumstantial evidence of the strongest character was in support of the criminal charge. How the case terminated I am not at liberty to disclose; but I refer to it now because erroneous opinions are being expressed on this matter, and students are being taught by text-books what is not accurate in regard to it. It may be thought that it is a difficult matter to decide such a question in physiological anatomy as was here at issue; but for those who have had opportunities, full and sufficient, of comparing the differences between *true* and *false* corpora lutea, there is as much difference, and one which can be as clearly demonstrated, as there is between a true and a sham diamond. Those who have not had experience of the kind required are not entitled to give an opinion upon it.

I am, Sirs, yours faithfully,

Savile-row, W., Dec. 19th 1891. ROBERT LEE.

HONORARY DEGREES IN PUBLIC HEALTH.

To the Editors of THE LANCET.

SIRS,—Will you allow me to draw attention to the fact that the University of Durham has recently conferred its degree of Doctor of Hygiene (D.Hy.) upon a gentleman who had not previously passed any special examination for the same, and to point out that if this is to be taken as a precedent a great injustice will be done to all those who have obtained a Public Health qualification after public examination, and subsequent to great inconvenience and expense. The conferring of a Public Health qualification in this manner is also clearly contrary to the spirit of the Medical Act, 1886, Section 21, which enacts that no registrable diploma for proficiency in Sanitary Science, Public Health, or State Medicine shall be granted except after special examination. It may be urged that the conferring of a Degree in Hygiene has a parallel in the giving of such degrees as D.C.L. or LL.D. In reply to this I would point out that the possession of these latter carries with them no statutory privileges of a public character; whilst the former, certainly by inference, enables the possessor to apply for the most valuable of Public Health appointments in competition with those who have obtained their privilege to do so after submission to the stringent regulations of the General Medical Council and the examinations of the licensing authorities.

I am, Sirs, yours faithfully,

WILLIAM R. SMITH, M.D., D.Sc., D.P.H Camb.,
Professor of Forensic Medicine in King's College, &c.

Dec. 12th, 1891.

PAROTITIS IN GASTRIC ULCER.

To the Editors of THE LANCET.

SIRS,—I have read with much interest Dr. Donkin's letter on the above subject. In the last two years two cases have come under my notice, both with nearly parallel histories. Both cases had severe hæmatemesis, and both were fed strictly by rectum. The first case was that of a young woman who was seized with sharp hæmatemesis and sent to University College Hospital, where she was fed by rectum. She developed there double parotitis and died with hyperpyrexia. The post-mortem examination, though most carefully performed, disclosed no gastric ulcer, nor could the source of bleeding be discovered. The second case commenced with violent hæmatemesis. Rectal feeding was at once resorted to. She had five attacks of bleeding, and nearly lost her life in the last. After ten days double parotitis set in; the temperature rose to 105·2°; both parotids suppurated, and she made a very slow recovery. There is no doubt some connexion between hæmatemesis and suppurative parotid bubo, though what the connexion is it is difficult to state.

I am, Sirs, yours truly,

Cheniston-gardens, W., Dec., 1891. E. A. BARTON.

NORTHERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENT.)

Influenza.

THE influenza epidemic still continues very prevalent in Newcastle and Gateshead, and, indeed, in the whole Tyneside district. A very sad case took place at Walker last week arising out of influenza. A married woman, whose husband had recently died of the disease, and who was herself also attacked, in a fit of maniacal excitement set fire to herself with a paraffin lamp, and before medical aid could be obtained died from her injuries. At Stockton it is reported that the medical officer of health and most of the corporation officials are laid up. At Middlesbrough a father and son are reported as lying dead from the affection. In the Sedgefield district it is reported that the disease is very severe, the medical officer of health, Mr. Sheraton, suffering from it. It has also broken out at the Durham County Lunatic Asylum, near Sedgefield, which may be a very serious matter, as it contains several hundred patients; but so far it is confined to attendants. At Hawick it is so severe that there is scarcely a family not affected by it. The death-rate is reported high amongst old people, who are said to be succumbing to the secondary attacks of bronchial inflammation. In other border towns the epidemic is quite as severe.

Testimonial to Dr. D S Dunn, of Skelton.

Dr. D S. Dunn, of Skelton, having been obliged to relinquish his practice owing to ill health, after eleven years' arduous work in a district extending over mountain, moor, and fell, his many friends and patients decided to present him with a testimonial last week as a token of their estimation of his many excellent qualities as a resident and as a practitioner. The presentation of an address with a purse of 130 guineas was given at an entertainment provided by and presided over by R. P. Petch, Esq., of Priestcroft. Mr. Petch is vice-chairman of the Guisborough Board of Guardians, under whom Dr. Dunn held the appointment of medical officer of the Skelton district, and he spoke in the highest terms of Dr. Dunn's kindness to all, and especially to the miners and the poor under his care, and wished him a speedy restoration to health. In all these good wishes Dr. Dunn's professional

friends will join, and they are many, extending from the Tees to the Tyne and from Roseberry Topping to the sea.

Death of Dr. Benjamin Barkus, late of Gateshead.

I regret to have to record the death of an old friend and a well known practitioner of Newcastle and Gateshead. Dr. Benjamin Barkus died in Newcastle last Tuesday of chronic visceral disease, at the age of seventy-one. He was a native of Gateshead, where he mostly practised. After serving his time in the old-fashioned way to Mr. Baird, an eminent surgeon in Newcastle, he proceeded to Dublin, where he attended most of his lectures at Trinity College, and took out his midwifery at the Rotunda. He then went to London, attending at the Middlesex Hospital before taking his M.R.C.S. and L.S.A. in 1842. In 1845 he took his M.D. at St. Andrews, and commenced active practice in Gateshead, where he was very successful, being, as well as a good all-round and careful practitioner, possessed of quiet, genial, and attractive manners, always acceptable in the sick room; but Dr. Barkus was a man of parts as well—a scholar even of the Hebrew language as well as general literature. He believed in the practice of his profession as a whole, and never adopted any specialty; still, he was much sought by his juniors in difficult midwifery cases, and his aid was always forthcoming. In his dealings with his professional brethren he was "the very soul of honour." In my own opinion he might well have taken a higher standing in his profession had he so aspired; but he was held back by a native modesty, and so allowed many to pass him, so to speak, in the race. Dr. Barkus lost his wife about eight years ago, and having acquired a competency, practically retired to Newcastle. He has left no family. He was a J.P. for Gateshead.

Death of Dr. J. M. Maclagan, late of Riding-Mill-on-Tyne.

News reached Hexham last week of the death of Dr. J. M. Maclagan, for sixteen years medical officer of health to the Hexham rural sanitary authority. Dr. Maclagan died at Lenzie, in Scotland, where he retired about two years ago owing to his having sustained a severe fracture of the femur in frosty weather as he was leaving a meeting of the authority in Hexham, which accident I recorded in this correspondence at the time. Since then his general health had also gradually failed. Dr. Maclagan had seen much service in his profession at home and abroad, having served some time in Indian military departments. He was about sixty-four years of age, and has left a widow and family. Two distinguished brothers survive him—the present Archbishop of York and Professor Sir Douglas Maclagan of Edinburgh.

Newcastle-on-Tyne, Dec. 22nd.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

Annual Dinner of the Royal College of Physicians.

THIS dinner was held on Thursday of last week, the President, Professor Simpson occupying the chair. Representatives of many learned and civic bodies were present, the company being an unusually large one, while the dinner maintained its foremost place amongst Edinburgh dinners. The chairman's speeches were short, pointed, and graceful, and his excellent example was followed by most of the other speakers, so the last toast was reached soon after eleven, instead of near the small hours of the morning.

Bazaar in Edinburgh for Women's Medical School.

On the last three days of last week a bazaar was held in the Waverley Market to raise funds for the Scottish Association for the Medical Education of Women. This is one of two medical schools for women in Edinburgh, and they hoped to raise £5000. The bazaar, however, followed several other monster bazaars, and people had evidently spent all their superfluous money, for the three days' sale only realised about £1000.

Hospital Accommodation for Perth.

The directors of the Perth Royal Infirmary have under consideration the erection of a separate building for infectious cases. It is proposed that the expense be met by the infirmary, the County Council, and the Burgh local authority.

Edinburgh, Dec. 22nd.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

Death of Robert Wade, L.R.C.S.I.

THIS gentleman died suddenly on Sunday morning at his residence, Great Brunswick-street, Dublin, from apoplexy, aged fifty-eight years, regretted by a large circle of friends. Deceased was a member of the Corporation for some years, and contested the vacant coronership for the city of Dublin a short time ago, being second among a large number of candidates. He was a governor of the Richmond Lunatic Asylum and of the Royal Irish Academy of Music.

British Dental Association: Irish Branch.

The annual meeting of the Irish Branch was held last week at the College of Surgeons. Mr. W. B. Pearsall was elected president, R. T. Stack vice-president, A. F. Thomson treasurer, and G. M. Murray honorary secretary for 1892; the members of Council being Messrs. Andrew, Clarke, Elwood, McStay, W. C. Corbett, A. W. Baker, D. Corbett, D. Corbett, jun., R. H. Moore, F. Ryding, C. Wall, P. O'Meehan, and H. Williams. The president showed some photographs by limelight of professional interest; this was followed by a discussion, and the proceedings terminated.

Death of Dr. C. A. Harvey of Cork.

On the 15th inst. Charles Armstrong Harvey died at 8, Camden-place, Cork, in his forty-first year, from pneumonia. Dr. Harvey was a graduate in arts, medicine, and surgery of the late Queen's University in Ireland, was visiting physician to the Cork Fever Hospital, and dispensary medical officer to one of the Cork dispensary districts. Much public regret is expressed for the early termination of so promising a career.

Health of Cork for November.

As compared with the previous month, there were less cases of scarlet fever and simple fever reported, but an increase in the number of typhoid fever. The latter disease is more or less of a mild type, as shown by the very small mortality—viz., two. Both the birth- and death-rates were much higher than for the corresponding period last year.

Dr. G. P. Nugent has been appointed University examiner in clinical medicine in Trinity College, Dublin.

Health of Belfast.

From the annual report presented to the Public Health Committee of the Corporation of Belfast on Dec. 17th, I learn that the death-rate for the week was 42·2, of which 3·5 was due to zymotic diseases, and 20·5 to diseases of the chest. In the previous week the mortality was extremely high, being 45·6; zymotic diseases being credited with 3·2 and diseases of the chest 26·8 of the deaths. It will thus be seen that there is an improvement in the total death-rate, as well as in that from pulmonary diseases. This very high mortality is due almost entirely to the presence of the influenza epidemic, which is much the most severe visitation of that disease we have yet had in Belfast. There seems now evidence that it has nearly spent itself, this being due to the fact that there would seem to be few people who have not already been attacked by the disease. The weather has changed from the damp, "muggy" condition so prevalent to a sharp frost.

The Belfast Hospital for Sick Children.

Four of the children of the late Sir Charles Lanyon have handed £511 10s. to the treasurer of the Belfast Hospital for Sick Children, to provide and endow a cot in memory of their late father. During the present session thirty-nine students are attending the practice of the hospital, the largest class which has yet been held there for clinical instruction.

The Christmas Holidays.

The classes at the College have closed, and clinical instruction at the hospitals has ceased for a week during the Christmas recess.

The Health Lectures.

Dr. Lindsay gave a lecture in this series in connexion with the University extension scheme on Dec. 14th, on the Influence of the Mind on the Body; and on last Monday

the final one, on the Food we Eat, was given by Dr. John Strahan. The lectures are to be published in book form, with an introduction by the President of Queen's College.

Dec. 21st.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Opening of the New Library of the Faculty of Medicine.

On Monday, the 14th inst., without any semblance of ceremonies, the doors of the splendid new library, which now replaces the dingy old room hitherto available, were thrown open to students of the Faculty. Notwithstanding its defects—and these exist, notably in the matter of daylight—the new library is a vast improvement on the old one, and workers are now provided with a well-aired, spacious, and comfortable *locale* wherein to pursue their studies and bibliographical researches. There are in the central reading-room 246 numbered seats, as against fifty-four provided in an adjoining room, admission to which is limited to professors, students preparing their inaugural theses, and others armed with special tickets. Modern improvements, such as the electric light and the telephone, are utilised, the latter apparatus allowing of orders being transmitted from one part of the library to the other. The admirable regulations obtaining at the Bibliothèque Nationale have been adopted at the Faculty. They are as follows:—After having deposited in the free cloak-room such impedimenta as umbrellas, walking-sticks, overcoats, &c., the reader chooses his place; he then inscribes his name and address, the number of the seat he occupies, and the title of the volume he wishes to borrow on a dated form provided for the purpose. This form he hands to a librarian, who supplies him with the book or books applied for. On retiring the reader returns the volume lent to the librarian, who effaces the form. On leaving the building the obliterated bulletin is remitted to the porter at the door. To guide the authorities in the selection of works, of which a large supply of copies is in request, a register is kept, in which a list of volumes non-procurable at the library is inscribed by disappointed readers. The library of the Paris Faculty is a veritable beehive, no less than 200,000 readers consulting annually within its walls 1,500,000 volumes. I am greatly mistaken if these formidable figures are not further increased in the near future, for it was assuredly not a treat to sit for many consecutive hours, as I have done, in the depressing atmosphere of the now happily discarded room where so many thousands of theses have been written. This venerable old Faculty is making distinct advances in the right direction, and we may reasonably predict for it a revival of the renown it enjoyed in the palmy days when medical education was not considered complete unless some time had been passed within its folds.

Honours for British Medical Men at the Académie de Médecine.

Your readers learned from last week's correspondence that the Alvarenga prize had been divided between Dr. Bateman of Norwich and Dr. Leguen of Paris. It is only fair to our distinguished compatriot to rectify an error in qualifying his important work of 400 pages as a *paper*. It may not be generally known that Dr. Bateman is a French *officier de santé*. For the Prix Daudet there were ten competitors. The prize was not awarded, but 1000 francs were equally divided *à titre d'encouragement* between Dr. James Berry, surgeon to the Royal Free Hospital, London, and a Belgian practitioner. The subject was "Goitre: its surgical treatment and the immediate and remote consequences of this treatment."

The Scalenus Muscle.

The majority of English anatomists will be inclined to characterise the above heading as a piece of profanity, and this sentiment will probably be shared by pupils of Henle in Germany and Sappé in France. In effect, English and German anatomists count three distinct scaleni muscles, while in this country we are content with two. If we are to believe M. Sebileau (Société de Biologie, Dec. 12th), the old idea that there exists in reality only one scalenus muscle is the correct one. According to him, this single muscle splits below in order to give passage to the brachial plexus and the subclavian artery. He adduces as proof of his contention the following reasons:—1. The uniformity of the insertion of the scalenic mass. 2. The frequent existence of anastomotic fasciculi between the anterior and the posterior scaleni. 3. The splitting sometimes observed of the anterior scalenus for the passage of the subclavian artery. 4. The passage in certain subjects of the brachial plexus through the scalenus posticus. 5. The fusion over the pleural dome of the pleuro-transverse muscle and the costo-pleural ligament. M. Sebileau regards the scalenus muscle as a group of intercostal muscles. It is, in fact, a *long cervical intercostal*, being inserted at both ends into ribs, above to the anterior tubercle of a transverse process—a rudimentary rib.

Buried Alive.

It is not often that the horrible incident of a person being buried while in the lethargic state has to be recorded. The *Radical* of Nov. 17th is responsible for the following narrative of such an accident which occurred to a young woman aged twenty-two, a native of Mirabel, in the canton of Caussade. Seized with syncope after being delivered of a child, the friends, believing her to be dead, registered the death, and made arrangements for the funeral. But no sooner had the unfortunate woman been laid under the sod than the person who had "laid her out" made a statement to the effect that when she performed this duty she noticed that the part of the bed on which the body lay was still warm. A doctor was immediately sent for and the body exhumed. As signs of vitality were still present, ineffectual efforts were made to resuscitate the poor woman, who breathed her last in the cemetery—asphyxiated. In commenting on this regrettable incident, the *Progrès Médical* remarks that such an accident would be rendered impossible were the practice of cremation adopted universally.

Paris, Dec. 22nd.

Medical News.

UNIVERSITY OF LONDON. — The following candidates have been successful in the respective examinations for the degree of M.D.:—

Medicine.

Barratt, J. O. W., B.S., B.Sc., Univ. Coll.
*Bowman, H. M., St. Bar. Hosp.
Brazil, Walter H., Owens C. & Manch. R. Infir.
Brock, E. H., B.S., Guy's Hosp.
Bryant, J. H., B.S., Guy's Hosp.
Cuff, H. E., B.S., Guy's Hosp.
Dyall, T. J., B.S., St. Bar. Hosp.
Evans, P. C., Ed. U. & Guy's Hosp.
Fawcett, J., B.S., Guy's Hosp.
Forsbrook, W. H. R., West. Hosp.
Gill, J. McDonald, Guy's Hosp.
Gill, Rainsford F., Univ. Coll.
Goodfellow, Thos A., Owens C. & Manch. R. Infir.
Grange, F., Charing Cross Hosp.
Griffiths, W., B.Sc., Midd. Hosp.
Hall, F. Wm., B.S., Guy's Hosp.
Horden, Herbert H., Univ. Coll.
Kitching, C. MacGowan, B.S., Guy's Hosp.
Ledward, Milton Prentice, Owens C. & Manch. R. Infir.
Leigh, Randle, B.Sc., Univ. Colls., Liverp. & Lond.
Lord, Robert Ellis, B.Sc., Owens C. & Manch. R. Infir.
Lyndon, Arnold, St. Bar. Hosp.
*Maillard, W. Job, Guy's Hosp.
Mothersole, R. D., M.S., Guy's Hosp.
Pasmore, Edwin S., Univ. Coll.
Paton, Edward P., St. Bar Hosp.
Pennell, T. L., B.Sc. (Gold Medal), Univ. Coll.
Richards, J. S., B.S., Guy's Hosp.
*Ricketts, T. F., B.S., B.Sc., Guy's Hosp.
Roberts, E. A., St. Thom. Hosp.
Robertson, John, Guy's Hosp.
Robinson, George H. D., B.S., St. Bar. Hosp.
Salmon, A. G., B.S., St. Bar. Hosp.
Scott, Arnold, Guy's Hosp.
Sequeira, J. Harry, Lond. Hosp.
Short, T. Sydney, King's C. Lond. & Queen's C. Birm.
Snell, E. Hugh, B.Sc., Queen's C. Birm.
Snell, Sidney H., B.S., Univ. Coll.
Strugnell, W. T., St. Bar. Hosp.
Tidey, S. Alex., St. Mary's Hosp.
*Tilley, Herbert, B.S., Univ. Coll.
Webber, H. W., B.S., Guy's Hosp.
Williams, Lewis, B.S., Univ. Coll.
Williams, Patrick W., Bristol
Wills, Ernest, Univ. Coll.

State Medicine.

Davies, David S., St. Thos. Hosp.
O'Reilly, George H., N'hampton Gen. Infir. & King's Coll.
Ridge, J. Jas, M.D., B.S., B.A., B.Sc., St. Thos. Hosp.
Warry, John King, Lond. Hosp.

* Obtained the number of marks qualifying for the Gold Medal.

The following gentlemen have been successful in the M.S. examination:—

Bailey, R. Cozens (Gold Medal), St. Bartholomew's Hospital
Bird, Robert, M.D., St. Bartholomew's Hospital

The following candidates have been successful at the recent B.S. examination:—

First Division.

Blacker, George F., Univ. Coll.
Blomfield, E. E., Lond. Hosp.
Buchanan, George S., B.Sc., St. Bar. Hosp.
Cook, H. Geo. G., St. Bar. Hosp.
Davies, T. B. Philip, Guy's Hosp.
Drew, Douglas, Univ. Coll.
Eccles, W. McA., St. Bar. Hosp.
Elliot, R. Henry, St. Bar. Hosp.
Hodgson, Harold, Guy's Hosp.
Hogarth, B. W., Guy's Hosp.
Pickard, Ransom, St. Bar. Hosp.
Platt, J. E., M.D., Owens Coll. & Manch. R. Infir.
Rake, A. Theodore, Guy's Hosp.
Rogers, Wm. Gusterson, Guy's Hosp.
Waring, Holburt J., B.Sc., St. Bar. Hosp.
Wohlmann, A. S., Guy's Hosp.

Second Division.

Bueno de Mesquita, Solomon, Guy's Hosp.
Cowen, Thos. P., St. Thos. Hosp.
Curtis, Henry Jones, Univ. Coll.
Green, Douglas R., Univ. Coll.
McLaren, Alice Janet, Lond. Sch. Med. & R. Free Hosp.
Richards, Harold M., Univ. Coll.
Roberts, J. Lloyd, M.D., B.A., B.Sc., Guy's Hosp.
Salter, Charles E., Guy's Hosp.
Simmons, Gerald Allpress, St. Mary's Hosp.
Stevens, Cecil R., St. Bar. Hosp.
Taylor, F. R. P., Westmin. Hosp.
Tebb, Albert E., Guy's Hosp.
Thomas, Abraham, Guy's Hosp.
Ware, Ernest E., St. Thos. Hosp.
Wilson, J. Grattan, Lond. Hosp.
Young, John, Guy's Hosp.

UNIVERSITY OF CAMBRIDGE. — At the Third Examination for Medical and Surgical degrees the following gentlemen were examined and approved:—

Part I.—Ds. Barrett, Cai.; Ds. Brooksbank, Trin. H.; Ds. Carr, Trin; Ds. Chappel, Cai.; Ds. Connop, Cai.; Ds. Coulby, Trin.; Ds. Crofton-Atkins, Clare; Ds. Doman, Cai.; Mag. Durham, King's; Ds. Evans, Joh.; Ds. Floyd, Clare; Ds. Heppell, Cai.; Ds. Hollis, Sid.; Ds. Joyce, Queen's; Ds. Langdon-Down, P., Trin.; Ds. Lister, W. T., Trin.; Ds. Mason, G. A., Joh.; Ds. Master, H. Cav.; Mag. Melsome, Queen's; Ds. Paterson, Trin.; Pinder, Queen's; Ds. Thomas, C. N., Trin.; Ds. Thomas, H. Cav.; Ds. Walker, W. W., Trin.; Ds. Wilson, A. H., Christ's; Ds. Windsor, Emman.; Ds. Young, Joh.

Part II.—Ds. Attfield, Pet.; Ds. Atlee, J., Joh.; Ds. Bolus, Jesus; Ds. Bradford, Cai.; Carling, W.; Ds. Cowell, Joh.; Ds. Craig, Cai.; Ds. Dorman, Clare; Ds. Drake, Clare; Mag. Durham, King's; Mag. Eccles, Down; Ds. Edmondson, Joh.; Ds. Evans, Joh.; Ds. Ferguson, Cai; Ds. Fisher, Cai.; Ds. Fooks, Jesus; Ds. Freer, Cai.; Ds. Gillam, H. Cav.; Mag. Gillibrand, Queens'; Ds. Glover, L. G., Joh.; Ds. Godson, A. H., Joh.; Ds. Grimsdale, Cai.; Ds. Hulbert, Trin.; Ds. Kent, Trin.; Ds. Law, Christ's; Ds. Lee, H. Cav.; Ds. Mason, G. A., Joh.; Ds. Mercer, W. B., Cai.; Ds. Perkins, Emman; Ds. Pridham, Cai.; Ds. Senior, Queens'; Ds. Shaw, W. H. C., Jesus; Ds. Simpson, H., Joh.; Ds. Stack, E. H. E., Pemb.; Mag. Stubbs, Trin.; Ds. Turner, F. M., Trin.; Mag. Wallace; Wrench, H. Cav.

SOCIETY OF APOTHECARIES OF LONDON. — The following candidates have passed the examination in the subjects indicated:—

Surgery.—C. W. Allen, St. Mary's Hospital; J. Dulberg, Manchester and Wurzburg; C. M. Fleury, E. E. Frazer, and W. A. Haslam, Guy's Hospital; S. P. Hopewell, London Hospital; C. J. Kelly, Montreal; J. T. Mills, Guy's Hospital; Walker Overend, St. Bartholomew's Hospital; Wilkinson Overend, St. Mary's Hospital; T. E. Pallett, Westminster Hospital; W. M. Palmer and H. C. Powell, Charing-cross Hospital; V. J. E. Robin, King's College; J. A. Samuel, St. Thomas's Hospital; C. H. C. Visick, University College; W. A. Ward, Middlesex Hospital; S. Wimbush, St. Bartholomew's Hospital; A. L. Wykham, Howard University, Washington; A. T. Wysard, St. Thomas's Hospital.

Medicine, Forensic Medicine, and Midwifery.—A. D. Bensusan, St. Thomas's Hospital; D. J. Caddy, King's College; C. M. Fleury, Guy's Hospital; H. J. Frederick, St. Thomas's Hospital; W. H. Goodson, London Hospital; A. Graydon, St. Thomas's Hospital; R. R. Hatherell, Cambridge and St. Thomas's Hospital; W. Hawker, Cambridge and Middlesex Hospital; C. J. Kelly, Montreal; J. E. Ramsay, University College; A. T. Wysard, St. Thomas's Hospital.

Medicine and Forensic Medicine.—J. Dulberg, Manchester and Wurzburg; W. M. Palmer, Charing-cross Hospital.

Medicine and Midwifery.—W. A. Haslam, Guy's Hospital.

Forensic Medicine and Midwifery.—C. S. Lewis, St. George's Hosp.

Forensic Medicine.—H. J. Forster, Westminster Hospital; P. G. Laver, St. Thomas's Hospital; H. C. Powell, Charing-cross Hospital; T. W. Smith, King's College Hospital.

To Messrs. Allen, Fleury, Goodson, Graydon, Hatherell, Hawker, Kelly, Laver, Overend (Wilkinson), Powell, Ramsay, Samuel, Visick, Wykham, and Wysard was granted the Diploma of the Society, entitling them to practise Medicine, Surgery, and Midwifery; enabling the holder to compete for Medical Appointments in the Army, Navy, and India Service, also for Poor-law appointments.

PHARMACEUTICAL SOCIETY OF IRELAND. — The following have passed the examination for Druggists:—Thomas Earl, Mary Fallon, Walter Kent, Daniel Lynch, John McCree, and Charles P. Winton.

ECCLESALL WORKHOUSE NEW INFIRMARY.—The formal laying of the foundation stone of a new infirmary at this workhouse took place on the 16th inst. The estimated outlay is £9000.

FOOTBALL CASUALTIES.—Whilst playing in an Association match on the 12th inst., at Caversham, between the Reading Reserves and Wokingham, a player fractured his arm, and was conveyed to the Royal Berkshire Hospital.—On the same day the following accidents occurred: In a match between the Notts County Rovers and the Derby County Wanderers, a young man "wrenched his knee"; and during the progress of the Middlesex Cup Tie, at Wimbledon, between the London Welsh and Polytechnic Clubs, a player sustained a fracture of the leg.—In a match between the Helpringham and Sleaford Teams, on Saturday, a player fractured his leg.

UNIVERSITY OF LONDON.—Lord Sherbrooke has presented £1000 to the University in recognition of his long association with the institution as a member of the Senate, and as its first representative in Paliament. The Senate, at its last meeting, resolved: "That the income of the fund be applied triennially in the award of a prize for the best essay, if of sufficient merit, embodying original research in some branch of science, the subject to be announced three years before the award. The competition to be open to all graduates of the University." The Earl of Derby, the present chancellor of the University, has expressed his intention of contributing £1000 for the foundation of a Granville Scholarship as a memorial of the late Earl Granville.

BEQUESTS AND DONATIONS TO HOSPITALS.—The late Mrs. Elizabeth Depret of Gloucester-place, London, bequeathed £1000 to the Royal Maternity Charity, Finsbury-square.—Mrs. Mary Fleet, late of Sydney-terrace, Reading, bequeathed £500 to the Royal Berkshire Hospital and £250 to the Reading Dispensary.—The Goldsmiths' Livery Company has made grants of £1000, £105, and £50 to Guy's Hospital, to the British Home for Incurables, and to the National Truss Society respectively.—The Mercers' Livery Company has made grants of twenty guineas and £31 10*s.* to the Richmond Hospital, Surrey, and the Royal Westminster Ophthalmic Hospital respectively.—The treasurer of the Royal Infirmary, Liverpool, has received £467 18*s* 1*d.* from Messrs. Heywood and Irvine, joint treasurers of the Indian Famine Relief Fund, being a moiety of the undistributed balance.—The late Mr. James Wilson (Liverpool) bequeathed £1000 to the Royal Infirmary, Liverpool, £500 each to the Royal Southern Hospital and the Northern Hospital, and sums varying from £300 to £50 to other medical and charitable institutions.—By the decease of the wife of the late Mr. John Booth of Wharncliffe Villas, Sheffield, the Sheffield General Infirmary and the Sheffield Public Hospital benefit to the amount of £100 each.—Mrs. Sykes, late of Blackpool, bequeathed £1000 to the Salford Royal Hospital.—Miss Emma C. Allen, late of Finchley-road, London, left by her will £100 each to the Middlesex Hospital, Guy's Hospital, and the London Hospital.—The late Mrs. Mary A. Spencer-Ball of Devonshire-place, London, bequeathed £10,000 to the London Temperance Hospital.—"A friend" has sent a donation of £300 to the Gateshead Sick Children's Hospital.—Mr. George Schraeder, late of Glasgow, bequeathed £100 to the Victoria Infirmary, Glasgow.—The late Miss Mellor of Leamington bequeathed (free of legacy duty) £5000 each to the Hospital for Women, Soho-square, the Surgical Aid Society, the Brompton Cancer Hospital, the National Hospital for Paralytics, the Warneford Hospital, Leamington, and the Midland Counties Hospital for Incurables.—Mr. Joseph Verdin has given £6000 to the Victoria Infirmary at Northwich.—The allocation of subscriptions from workers in the Singer Manufacturing Company has been, *inter alia*, as under for the year 1891: the Western Infirmary, Glasgow, £153; the Royal Infirmary, £131 17*s.* 4*d*; and the Dunoon Homes, £131.—Mr. Robert A. Newbon, late of Islington, bequeathed to the Great Northern Central Hospital, to found a Newbon ward, £15,000; £1000 each to the following hospitals: St. Bartholomew's, St. George's, Guy's, St. Thomas's, King's College, University College, Charing Cross, the Westminster Hospital, the London and Middlesex Hospitals, St. Mary's Hospital, St. Peter's Hospital for Stone, the Royal Free and the London Fever Hospitals, the Victoria Park, Brompton, and City-road Hospitals for Diseases of the Chest, the "Dreadnought" Seamen's Hospital, the Royal London Ophthalmic Hospital, the National Hospital for the Paralysed and Epileptic, the Central London Throat and Ear Hospital, Fulham-road Cancer Hospital, German Hospital, West-end Hospital for Diseases of the Nervous System, Poplar Hospital for Accidents, the East London, Great Ormond-street, and Victoria Hospitals for Sick Children, St. Luke's Hospital, and the Metropolitan Free Hospital, the Lock Hospital, Harrow-road, North London Consumption Hospital, Hampstead, National Orthopædic Hospital, the National Hospital for Heart Diseases, the Royal Hospital for Incurables and the British Home for Incurables, the North London Nursing Association, the Holloway and North Islington Dispensary, and the Finsbury Dispensary; £1000 each to the Royal Sea Bathing Infirmary, National Truss Society, City of London Truss Society, and the Surgical Aid Society.

DIPHTHERIA IN HUNGARY.—The *Times* correspondent reports a malignant epidemic of diphtheria to be raging in South Hungary. In some villages, it is stated, all the children have succumbed.

THE ACADEMY OF MEDICINE of Paris, at its annual meeting held last week, awarded the sum of 1000 francs jointly to Mr. James Berry of London and M. Léon Gallez of Belgium, for their memoirs "Sur le traitement chirurgicale du goitre et de ses conséquences immédiates et eloignées."

HOSPITAL SATURDAY FUND.—At a meeting of the board of delegates of this fund, held on Saturday night, Mr. R. B. D. Acland presiding, awards amounting in the aggregate to £16,000 were made. To twenty-seven general hospitals £11,832 19*s.* was granted; thirty-two dispensaries, £936 18*s.*; and fourteen convalescent homes, £1418 14*s.*

THE ALBERT AND VICTORIA SOCIETY, LONDON.—The seventeenth annual dinner of this Society was held at the Holborn Restaurant on the 3rd inst. There was a very large attendance, Lieutenant-Colonel Wetherby occupying the chair. The Society is the outcome of a special hospital appeal made nearly twenty years ago. During the eighteen years of its existence it has paid upwards of £2000 to various metropolitan hospitals and charitable institutions, and distributed among the poorer classes 4953 letters of admission to those charities.

PROPOSED NEW CORONERS' DISTRICTS.—Great inconvenience has been caused by the present arrangement of the coroners' districts, which are partly in London and partly in the county of Middlesex; and with the view of remedying it, an arrangement is said to have been arrived at by which a petition, necessary under the Act, has been prepared, and will be presented to the Queen, praying for an alteration of the districts. The Middlesex petition proposes that the present south-eastern district should be abolished so far as the City is concerned, and that a new eastern district, to comprise the whole of the parish of Tottenham; a central district, to comprise the parishes of Finchley, Friern Barnet, Hendon, Hornsey, and South Mimms; and a western district, which shall include forty-four parishes, extending from Hammersmith to West Drayton, should be formed.

NOTTINGHAM MEDICO-CHIRURGICAL SOCIETY.—The annual dinner of this Society was held at the Flying Horse Hotel, Nottingham, on Friday, Dec. 18th. The president, Mr. A. R. Anderson, F.R.C.S., occupied the chair, and over forty members and visitors were present. A very pleasant evening was spent, largely owing to the entertaining powers of some of those present. The following toasts were given:—"The Queen," by the President; "The Visitors," proposed by Mr. Williams and responded to by Mr Blandy; "Success to our Society," proposed by Dr. Handford and responded to by Mr. Snell; "The President," proposed by Mr. Pryce and responded to by Mr. Anderson. Among those who gave vocal or instrumental music and recitations were:—Drs. Geraty, Sprott, and Spennell, Messrs. Bradley, E. M. Keely, J. Lambert, R. Miller, F. Sherlock, Smith and Youngman. The Society is in a satisfactory state, and includesnea rly ninety practitioners of the town and neighbourhood. Meetings are held once a fortnight during the winter.

PRESENTATIONS.—Dr. Francis Hyde Forshall, of Southwood-lane, Highgate, has been presented with a handsome collection of plate, value £300, by a large number of the leading residents of Highgate.—Mr. Percy Pope, L.R.C.P. Edin., M.R.C.S., lately Junior Assistant Medical Officer of the State Criminal Asylum, Broadmoor, has been presented by the Broadmoor Cricket Team with a first-class bat and a silver shield, which bears an appropriate inscription.—On Thursday, the 16th inst., a handsome clock and silver cigarette-case were presented to Mr. William Rawes, M.B., F.R.C.S. Eng., at a large meeting in the students' club at the London Hospital, on the occasion of his resigning the post of physiological demonstrator. An illuminated address, which accompanied the testimonial, having been read, Mr. L. A. Smith expressed to Mr. Rawes, on behalf of his fellow students, his sincere regret occasioned by his retirement. He said they were losing not only a conscientious and painstaking teacher, but also a personal friend.

HYPNOTISM IN BELGIUM.—The Court of Appeal in Brussels has recently had before it a case where three persons had been sentenced to eight years' imprisonment for having practised medicine, illegally employing hypnotism for the cure of various affections. Much to the surprise of the medical profession, the appeal was allowed, and the prisoners were discharged.

DIPHTHERIA IN NEW YORK.—The *New York Medical Journal* gives a table of the cases and deaths from infectious diseases reported during the two weeks ending Nov. 24th, 1891. In the week ending Nov 17th, there were 112 cases of diphtheria and 39 deaths; in the week ending Nov. 24th there were 113 cases and 33 deaths. In the corresponding weeks in London the deaths from diphtheria were respectively 25 and 24.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.*

CAMPBELL, J. MUNRO, M.B., C.M. Glasg., has been appointed Medical Officer to the Workhouse at Caersws, Montgomeryshire, vice Daniel Ferguson, resigned.

CHAPLIN, T. H. ARNOLD, M.B. Cantab., M.R.C.P., has been appointed Pathologist to the City of London Hospital for Diseases of the Chest, Victoria-park, vice Dr. W. J. Hadley.

CLAPHAM, CROCHLEY, M.D. Brux., M.R.C.P. Edin., L.R.C.P. Lond., M.R.C.S., has been appointed Honorary Physician to the Sheffield Public Hospital and Dispensary, vice Dr. Sydney Roberts, resigned.

CLARK, CHAS. M., M.D. Brussels, L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer to the Post-office, Dorking District.

DARRELL, H. W., L.R.C.P. Lond., has been appointed Medical Officer for the Third Sanitary District of the Norwich Union, vice Crook, resigned.

GABB, J. E., L.R.C.P., L.M. Edin., M.R.C.S., has been appointed Medical Officer of the Shrewsbury Dispensary, vice Gray, resigned.

GILLIES, PATRICK HUNTER, M.B., C.M. Edin., has been appointed Junior Assistant Medical Officer to the Cumberland and Westmoreland Asylum, vice S. G. M'Allum, M.B.

HARRIS, P. R. T., M.R.C.S., L.D.S., has been appointed Dental Surgeon to the Great Northern Central Hospital, vice Keen.

HORDER, T. GARRETT, L.R.C.P. Edin., M.R.C.S., has been appointed Medical Officer for the Cardiff District of the Trinity House, vice Dr. Hardyman, resigned.

HUBBARD, D. L., M.B. Durh., B.S., M.R.C.S., has been appointed Medical Officer for the Lynton Sanitary District of the Barnstaple Union, vice Berry, resigned.

KISBY, GEORGE, L.K.Q.C.P., L.M. Irel., L.F.P.S. Glasg., has been reappointed Medical Officer for the Seventh Sanitary District of the Ashton-under-Lyne Union.

LANE, J. O., M.D., M.B. Cantab., M.R.C.S., has been reappointed Medical Officer for the Burghill Sanitary District of the Hereford Union.

LEE, B. J., L.S.A., has been reappointed Medical Officer for the North Wingfield Sanitary District of the Chesterfield Union.

LITTLEWOOD, J. O., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer of Health for the Mansfield Rural Sanitary District of the Mansfield Union, vice Standed, deceased.

M'ALLUM, S. G., M.B., has been appointed Junior Assistant Medical Officer to the County Asylum, Chester.

MORRIS, E. F., M.R.C.S., has been reappointed Medical Officer for the Fownhope Sanitary District of the Hereford Union.

MURRAY, GEORGE R., B.A., M.B. Cantab., M.R.C.P. Lond., has been appointed Pathologist to the Hospital for Sick Children, Newcastle-on-Tyne.

ROBERTS, SIDNEY, M.A., M.B., B.C. Cantab., M.R.C.S., has been appointed Honorary Consulting Physician to the Sheffield Public Hospital and Dispensary.

ROBINSON, H., L.R.C.P., L.R.C.S. Edin., has been reappointed Medical Officer for the Hasland Sanitary District of the Chesterfield Union.

SPEECHLY, HARRY MARTINDALE, M.R.C.S., L.R.C.P. Lond., has been reappointed Receiving-room Officer at the London Hospital.

SWAYNE, W. C., M.B. Lond., M.R.C.S., L.R.C.P. Lond., has been appointed Honorary Obstetric Physician to the Royal Infirmary, Bristol, vice Wedmore.

THOMASON, R., M.R.C.S., has been reappointed Medical Officer for the Dewchurch Sanitary District of the Hereford Union.

WILLIAMS, E. C., M.B. Cantab., has been appointed House Physician to the City of London Hospital for Diseases of the Chest, Victoria-park.

WYNCOLL, J. W., M.B., C.M. Edin., has been appointed Surgeon at the Dudley Dispensary.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement.

ABINGDON UNION.—Medical Officer for the Second and Fourth Districts of the Union and of the Union House. Salary for the combined districts is £180, and for the Union House £45.

BELGRAVE HOSPITAL FOR CHILDREN, 79, Gloucester-street, S.W.—Ophthalmic and an Aural Surgeon.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria Park, E.—Resident Medical Officer. Salary £100 per annum, with board, &c. (Apply to the Secretary, at the Office, 24, Finsbury-circus, E.C.)

GENERAL INFIRMARY AT GLOUCESTER AND THE GLOUCESTERSHIRE EYE INFIRMARY.—Surgeon.

HOSPITAL FOR SICK CHILDREN, Great Ormond-street, London, W.C.—House Surgeon for one year. Salary £50 per annum, with board and residence in the hospital.

OLDHAM INFIRMARY.—Medical Officer for the Eye Department, to attend to In- and Out-patients. Honorarium £30 per annum.

OLDHAM INFIRMARY.—Junior House Surgeon. Salary £50 per annum, with board, lodging, and washing.

STAFFORDSHIRE GENERAL INFIRMARY, Stafford.—Assistant House Surgeon. Board, residence, and washing provided.

THE COPPICE, Nottingham.—Assistant Medical Officer. Salary £120 per annum, with furnished apartments, board, washing, and attendance.

UNIVERSITY OF EDINBURGH.—Additional Examiner in Medical Jurisprudence. Salary £30 a year for the Conjoint Examinership, with an allowance of £10 a year for travelling and other expenses in the case of an examiner not resident in Edinburgh or the immediate neighbourhood.

WESTERN GENERAL DISPENSARY, Marylebone-road, N.W.—Honorary Surgeon.

YORK COUNTY HOSPITAL.—Junior House Surgeon. Salary £40 per annum, with board and residence.

Births, Marriages, and Deaths.

BIRTHS.

GARDNER.—On Dec. 17th, at Penton Lodge, Avenue-crescent, Mill-hill-park, Acton, W., the wife of W. T. Gardner, M.B. Lond., M.R.C.S., L.R.C.P., of a daughter.

OWEN.—On Dec. 19th, at Great Cumberland-place, the wife of Edmund Owen, F.R.C.S., of a daughter.

TAYLOR.—On Dec. 18th, at Surbiton-hill, the wife of Arthur S. Taylor, B.A., M.B., B.C. Cantab., F.R.C.S., of a daughter.

WAKEFIELD.—On Dec. 19th, at The Beacon, Guildford, the wife of Horace Wakefield, M.R.C.S., L.R.C.P., of a son.

WALKER.—On Dec. 22nd, at Stalham, the wife of Norman Hendrie Walker, of a son.

MARRIAGES.

STARLING—WOOLDRIDGE.—On Dec. 21st, at St. Thomas's, Portman-square, Ernest Henry Starling, M.D., M.R.C.P., son of M. H. Starling, Esq., Barrister-at-law, Bombay, to Florence Amelia, eldest daughter of Sir Edward Sieveking, and widow of the late Leonard Wooldridge, M.D., D.Sc., M.R.C.P.

DEATHS.

BARKUS.—On Dec. 15th, at his residence, Jesmond-terrace, Newcastle-on-Tyne, Benjamin Barkus, M.D. St. And., M.R.C.S., aged 72.

BLACKMORE.—On Dec. 21st, at Sevenoaks, James Thomas Blackmore, L.R.C.P., aged 79.

BRUNTON.—On Dec. 15th, at Kirkdale, Sydenham, William Riddell Brunton, M.R.C.S., L.S.A., late Brigade-Surgeon East Surrey Volunteer Brigade, eldest son of the late Lieut. John Brunton, R.N., of Morpeth, aged 59.

MACLAGAN.—On Dec. 15th, at Dunrowan, Dumbartonshire, James McGrigor Maclagan, M.D., youngest son of the late David Maclagan, M.D., Edinburgh.

MERRYWEATHER.—On Dec. 18th, at Marlboro'-road, Gunnersbury, John Winsor Collins Merryweather, M.D., in his 70th year.

MOORE.—On Dec. 14th, at Aden, Joseph Moore, M.B., only son of the late John Moore, of Birkenhead, aged 24.

STEELE.—On Dec. 15th, at Bridge House, Strood, Kent, Stephen Steele, J.P., F.R.C.S., aged 83.

WOODMAN.—On Dec. 20th, at Christchurch-avenue, Brondesbury, N.W., William Robert Woodman, M.D., aged 62.

N.B.—A fee of 5s. is charged for the Insertion of Notices of Births, Marriages, and Deaths.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Dec. 23rd, 1891.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radia in Vacuo.	Maximum Temp. Shade.	Min. Temp	Rainfall.	Remarks at 8.30 A.M.
Dec. 17	30·44	N.E.	38	36	52	45	36	..	Hazy
,, 18	30·61	S.E.	37	34	46	40	34	..	Overcast
,, 19	30·68	S.E.	30	..	49	36	29	..	Foggy
,, 20	30·71	S.E.	30	..	..	34	28	..	Foggy
,, 21	30·66	S.E.	29	..	..	35	29	..	Foggy
,, 22	30·69	S.E.	24	..	..	33	23	..	Foggy
,, 23	30·47	E.	30	..	..	34	25	..	Foggy

Medical Diary for the ensuing Week.

Monday, December 28.

ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1.30 P.M., and on Tuesday Wednesday, Friday, and Saturday at the same hour.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations daily at 10 A.M.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1.30 P.M., and each day at the same hour.

CHELSEA HOSPITAL FOR WOMEN.—Operations, 2.30 P.M.; Thursday, 2.30.

HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M., and on Thursday at the same hour.

METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.

ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.

CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and each day in the week at the same hour.

UNIVERSITY COLLEGE HOSPITAL.—Ear and Throat Department, 9 A.M.; Thursday, 9 A.M.

Tuesday, December 29.

KING'S COLLEGE HOSPITAL.—Operations, 2 P.M.; Fridays and Saturdays at the same hour.

GUY'S HOSPITAL.—Operations, 1.30 P.M., and on Friday at same hour Ophthalmic Operations on Monday at 1.30 and Thursday at 2 P.M.

ST. THOMAS'S HOSPITAL.—Ophthalmic operations, 4 P.M.; Friday, 2 P.M.

ST. MARK'S HOSPITAL.—Operations, 2 P.M.

CANCER HOSPITAL, BROMPTON.—Operations, 2 P.M.; Saturday, 2 P.M.

WESTMINSTER HOSPITAL.—Operations, 2 P.M.

WEST LONDON HOSPITAL.—Operations, 2.30 P.M.

ST. MARY'S HOSPITAL.—Operations, 1.30 P.M. Consultations, Monday. 2.30 P.M. Skin Department, Monday and Thursday, 9.30 A.M. Throat Department, Tuesdays and Fridays, 1.30 P.M. Electro-therapeutics, same day, 2 P.M.

ROYAL INSTITUTION.—3 P.M. Professor John G. McKendrick: Life in Motion, or the Animal Machine.

Wednesday, December 30.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.

MIDDLESEX HOSPITAL.—Operations, 1.30 P.M.; Saturdays, 2 P.M. Obstetrical Operations, Thursdays, 2 P.M.

CHARING-CROSS HOSPITAL.—Operations, 3 P.M., and on Thursday and Friday at the same hour.

ST. THOMAS'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour.

LONDON HOSPITAL.—Operations, 2 P.M. Thursday & Saturday, same hour.

ST. PETER'S HOSPITAL, COVENT-GARDEN.—Operations, 2 P.M.

SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2.30 P.M.

GREAT NORTHERN CENTRAL HOSPITAL.—Operations, 2 P.M.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 1.30 P.M.; Skin Department, 1.45 P.M.; Saturday, 9.15 A.M.

ROYAL FREE HOSPITAL.—Operations, 2 P.M., and on Saturday.

CHILDREN'S HOSPITAL, GREAT ORMOND-STREET.—Operations, 9.30 A.M.; Surgical Visits on Wednesday and Saturday at 9.15 A.M.

Thursday, December 31.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M. Surgical Consultations, Wednesday, 1.30 P.M. Ophthalmic Operations, Friday, 1.30 P.M.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; Ear and Throat Department, 9 A.M.

ROYAL INSTITUTION.—3 P.M. Professor John G. McKendrick: Life in Motion, or the Animal Machine.

Friday, January 1.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

Saturday, January 2.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; and Skin Department, 9.15 A.M.

ROYAL INSTITUTION.—3 P.M. Professor John G. McKendrick: Life in Motion, or the Animal Machine.

Notes, Short Comments, & Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

All communications relating to the editorial business of the journal must be addressed "To the Editors."

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *to be addressed "To the Publisher."*

We cannot undertake to return MSS. not used.

THE ALVARENGA PRIZE IN MEDICINE.

THE following is the correct version of the details of the award of the above prize. The paragraph (for which, by the way, our correspondent was not responsible) inserted in our last issue contained one or two inaccuracies. At the annual meeting of the Academy of Medicine of Paris, held on the 15th inst., the Alvarenga prize, which is given annually for the best treatise on some medical subject, was awarded to Dr. Bateman of Norwich, for his treatise on "Aphasia and the Localisation of Speech," and to Dr. Leguen for his treatise on "Calculi of the Kidney and Ureter," these gentlemen being bracketed together *ex æquo*. This award carries with it the title of "Laureate of the Academy." There were twenty-five competitors, and as this prize is open to the whole world, we are glad to find that, in the person of Dr. Bateman, British medicine has been recognised in such a complimentary manner by a distinguished foreign Academy.

Medicus.—We must refer our correspondent to the article "Choice of a Text-book" in our Students' Number published in September last.

A Subscriber has not enclosed his card.

MADEIRA AS A HEALTH RESORT.

To the Editors of THE LANCET.

SIRS,—Dr. Favrat's letter, published in your journal of the 12th inst., written in defence of the health of Madeira and of its great qualities as a health resort of the first class in cases of tuberculosis of the lung and other organs, is very good from his own standpoint, and will probably serve its intended purpose, and more especially and certainly if the statistics of the island and its city, which he quotes, include and contain all the deaths occurring among the many invalids, English and foreign, who visit this beautiful island. This last-mentioned mortality must at times be considerable, and will tend to swell the figures materially if they are so included in the register. During my stay of three months—of December, 1890, and January and February, 1891—at one of the principal hotels in the city of Funchal, no less than three Englishmen died of phthisis in one house while I was there. One of them died of hæmoptysis in the first stage of the disease, and the remaining two in the last stage. While I am thus writing let me say that my experience of the climate is that it is all that can be desired, but there is one great drawback to sending invalids out there, and that is the existence of a disease peculiar and belonging to the city of Funchal which assuredly attacks every visitor, and which must prove very inimical to phthisical patients in whatever stage. This disease is usually called diarrhœa, and very often proves of a most inveterate description. I had never heard of it before I landed on the island, or I never should have gone there with my patient. In my opinion it is a fever, and as such should be avoided. I am bound therefore to recommend all invalid visitors to avoid remaining in the city or its immediate neighbourhood. Most of the hotels are in the town, and there they should not be. With this exception, I have everything to say in their favour. Both my patient and I made off at the end of February to the Island of St. Michael in the Azores, still suffering from the effects of the Madeira pest, where we quickly recovered, and, after remaining five weeks, returned safely to old England. Of course I can, and will, if you wish, give you much information about the nature and cause of this disease; also I shall be happy at some future time to send you an account of our visit to the Canaries, and to the Azores; the former I undertook alone, the latter in conjunction with my patient. The climate of St. Michael's is one of the most genial and equable in the world, and certainly the district of the "Furnas," nearly 1000 ft. above the sea level, proved to be the most charming and most restful of spots, and was truly a godsend to us.

I am, Sirs, yours faithfully,

Manchester, December, 1891. SENEX.

DEATH FROM SUBMERSION IN FLOUR.

DR. RAGNAR FALCK, of Lund, publishes in the *Nordiskt Medicinisches Arkiv* the case of a man who had been buried in flour, that had fallen down into the room used for blending the various kinds of flour, which was capable of containing 220 sackfuls. Rigor mortis was present in the body; fine flour was found in the hair, the external meatus, within the eyelids, in the nares, within the lips, and all about the throat. The mouth and œsophagus were filled with "paste," the stomach was empty, the cerebral membranes and vessels were hyperæmic to a marked degree, the heart was small and contained a little dark blood in the left auricle, and the lungs were incompressible and full of blood. It is particularly interesting to note that microscopical examination resulted in finding flour in the smallest bronchial twigs. This circumstance makes the case resemble death from drowning. French medico-legal authorities, however, state that in cases of submersion in dust-like substances, as when children are buried in ashes, nothing enters the respiratory organs, and Berenguier and Jaudion, after experimental studies, came to the conclusion that spasm of the glottis makes the entry of dust-like material impossible. Inferences, however, drawn from children's accidents, and from experiments with small animals, are hardly to be depended upon in cases of adults, and in Germany Casper, Hoffmann, and Maschka have published several cases of submersion in sand and similar substances, in which the material could certainly be found in the larger bronchi.

Alpha.—Such services are altogether exceptional, and no one but he who renders them can estimate them rightly. He knows the risks they have involved, the wear and tear of his own system, the neglect of other patients, and the value of his own time. He should, while not charging "excessively," charge adequately and with proper self-respect.

CASE OF GERMAN MEASLES(?)

To the Editors of THE LANCET.

SIRS,—I shall be greatly obliged if you can advise me in the following case.

H. M——, aged twenty, usually healthy, got wet through on the 13th. On the 14th she felt unwell in the evening and vomited; during the night she developed a sore-throat. Seen next day, the throat appeared like an ordinary follicular tonsillitis. She has had scarlet fever and measles, and there is no case of either in the village. By the 16th she felt much better, her temperature had fallen to normal, and she wanted to get up. In the evening of the 17th a few discrete raised spots were seen on her legs; during the next two days these increased and became confluent, without any characteristic appearance, being confined to the legs and gone by the 21st, and her temperature keeping normal. Fearing it might be an infectious disease running an abnormal course, a consultation was obtained, and it was decided that though it could not be definitely diagnosed, it should be removed from the house and isolated. This was done on the 20th, and on the 21st a slight branny desquamation commenced, which makes it appear more than ever like an infectious disease; and the serious question arises of what amount of disinfection of the house would be sufficient to prevent any fear whatever of spreading the disease, and upon this point I should be very glad to get decided information. A suggestion as to the nature of the disease would also be very welcome. I am, Sirs, yours truly,

Dec. 22nd, 1891. IGNORAMUS.

*** The case seems to us to be one of anomalous German measles.—ED. L.

A BELGIAN MAGISTRATE ON A BONE-SETTER CASE.

ALTHOUGH the practice of the healing art in Belgium is not as free as it is in this country, the protection which the medical profession receives from the law is frequently of a very illusory description, as is shown by a recent incident which is the subject of comment in the medical press. A patient with a dislocation of the shoulder presented himself at the house of a certain medical man, who, with the assistance of a *confrère*, reduced the dislocation. Nothing more seems to have been seen of the patient, and so, after the lapse of a reasonable time, he was reminded of his obligation to professional skill by a memorandum intimating that the fee for the operation was forty francs. No notice being taken of this, or of two subsequent communications, a summons was served, and the case tried by a magistrate. Evidence was produced to the effect that a fortnight after the reduction of the dislocation the patient, beginning to feel dissatisfied, consulted a bone-setter, who, of course, told him that the bone was still "out," and proceeded to "put it in." The sapient judgment of the magistrate was "that the doctors' operation had not completely succeeded, and that it was therefore necessary for recourse to be had to the defendant, who had completed the operation, restoring to the patient entire freedom of movement," consequently a reduction of ten francs was ordered.

Fair Play.—Our correspondent's honesty in the matter of titles will give him more satisfaction than the gentleman he describes can have in using such as do not attach to his qualifications.

CAN AN APOTHECARY USE THE TITLE OF PHYSICIAN?

One who Wishes to do Right.—We heartily recognise the "wish to do right" in our correspondent, who argues that, as an apothecary licensed to "practise medicine, surgery, and midwifery," he is justified in putting on his door-plate "Physician and Surgeon (Lond.)." He must allow he is taking a new departure here without the approval of the body from which he has his diploma, or the College of Physicians of London, whose diploma he would by any intelligent person be understood to have from the words on his door-plate. The exact meaning of the title "Physician" in the Medical Act has never been satisfactorily defined by a court of law. Perhaps such a court would take Dr. Johnson's somewhat vague definition—"one who professes the art of healing." In professional language it means one licensed or recognised by a College of Physicians. The College of Physicians would do good service by bringing this question into court. We think the title of the licentiates of the Apothecaries' Society entirely inadequate and unjust. But we think the injustice should be remedied by Act of Parliament.

A. B.—It is entirely a matter for agreement and contract. But in the absence of anything to the contrary they should fall into the general partnership account.

A CORRECTION.

To the Editors of THE LANCET.

SIRS,—I do not wish to pose as a coiner of words. In the report of my observations at the Medical Society of London on Dec. 14th, in the discussion on Influenza, I am credited with the term "cirrhalgia." Your excellent reporter has accurately given the gist of my general argument, but the word I used was *visceralgia*—not very good etymologically, but at any rate sanctioned by authority.

I am, Sirs, yours faithfully,

Harley-street, W., Dec. 21st, 1891. A. ERNEST SANSOM.

ROUND WORMS IN A CYST.

AN unexpected result in opening a cyst is reported by Don Antonio Martinez in *La Independencia Médica*. The patient was a middle-aged woman, who, after having been treated successfully for a gastric affection, called attention to a tumour of the size of a hen's egg, situated on the inner surface of the right thigh, which had existed for about three years. Being neither red nor tender, it was diagnosed after palpation as a cyst, and an iodine ointment prescribed. Three days later the doctor was sent for, as the ointment had caused lumps to form in the groin, and the pain had been very great. On examination it was found that the tumour was becoming gangrenous. On the sloughing tissues being cut away, a number of round worms were found curled up, having the appearance of ascarides lumbricoides. Altogether eleven of these were found. With an antiseptic dressing the patient did well.

ERRATUM.—In the sixteenth line of Dr. Low's paper on the Outbreak of Influenza on board the *Massilia*, page 1414, for "Oct. 28th" read *Sept. 28th*.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

COMMUNICATIONS, LETTERS, &c., have been received from—Mr. Atkinson, Leeds; Dr. Bell, Preston; Mr. Blakeney, Brisbane; Messrs. Brady and Martin, Newcastle-on-Tyne; Mr. Barclay, Liverpool; Dr. Beattie Bain, Dundee; Dr. Burton-Fanning, Norwich; Messrs. Burroughs and Wellcome, London; Mr. Bottom, Flint; Mr. Blair, Leeds; Mr. E. A. Barton, London; Messrs. Cooper and Holt; Messrs. J. and A. Churchill, London; Dr. Cotes; Mr. A. Duke, London; Messrs. Davey and Co., London; Mr. E. Donaldson, Londonderry; Mr. Fox, Richmond; Mr. Foley, Barnsley; Dr. Garrett, Ampthill; Mr. Gwynne, Brighton; Mr. Holmes, Manchester; Mr. Yeates Hunter, London; Mr. Harris, Cranbrook; Mr. Heywood, Manchester; Dr. O. Jennings, Paris; Dr. Jessett, London; Dr. J. Kerr, Bradford; Messrs. Keith and Co., Edinburgh; Mr. Kelynack, Manchester; Messrs. Kilner Bros., King's cross; Dr. Kenwood, London; Dr. R. Lee, London; Mr. Little, London; Dr. Lys; Mr. J. D. Lambert; Mr. Arbuthnot Lane; Mr. H. Lane, Bath; Mr. Mainwaring, London; Mr. J. H. Moore, Littleport; Messrs. Maythorn and Son, Biggleswade; Mr. A. E. Nash, Plymouth; Mr. W. G. Nevins, Hanley; Mr. H. Needes, London; Dr. Patterson, London; Mr. Price, Carnarvon; Mr. Rabache, Morchain; Mr. Reynolds, High Wycombe; Dr. Silk, London; Dr. C. Slater, London; Mr. Sims, London; Mr. C. Steele, Clifton; Mr. M. Scott, London; Mr. J. C. Spencer, Dulwich; Mr. Sinclair, South Petherton; Dr. Schwarz, Fünfkirchen; Dr. W. R. Smith, London; Dr. J. E. Sinclair, London; Messrs. Street and Co., London; Dr. S. J. Taylor, Norwich; Mr. Taylor, Derby; Dr. Thin, London; Dr. Turner, Felixtowe; Mr. Fisher Unwin, London; Mr. Woodyatt, Halifax; Dr. Hugh Woods, London; D. T. Zangger, Italy; One who wishes to do right; Cosmos, London; Alpha, Huddersfield; Jeyes' Sanitary Compounds Co., London; Fairplay; Alpha; Senex; A. B.; Western General Dispensary, London; Editor, *Bristol Mercury*.

LETTERS, *each with enclosure*, are also acknowledged from—Messrs. Lee and Martin, Birmingham; Mr. Storms, Canada; Messrs. Cassell and Co., London; Mr. Groves, Dorchester; Messrs. Giles, Schacht, and Co., Bristol; Dr. Barham, Torquay; Dr. Monckton, Kent; Mrs. Tyte, Minchinhampton; Mr. Caverhill, Dublin; Mr. Monckton, Paignton; Dr. Jones, Carnarvon; Dr. Davies, Bridgend; Mr. Croly, Rochester, U.S.A.; Mr. Barton, Grantham; Mr. Hughes, Ferndale; Mr. Nash, Hastings; Mr. Birkenhead, Atherstone; Mr. Sandibank, Dalbeattie, N.B.; Mr. Hamphreys, Keynsham; Dr. Ridge, Enfield; Mr. Crowe, Bournemouth; Mr. Ellis, Ossett; Mr. Bate, Bideford; Mr. Hughes, Hereford; Mr. Dunn, Birmingham; Dr. Moorhead, Notts; Mr. Donaldson, Leith; Mr. Wheeler, Loughborough; Messrs. Blondeau et Cie., London; Mr. Edmonds, Boston, U.S.A.; Messrs. Boake and Co., Stratford; Dr. Bell, Preston; Mr. Ure, Oldham; Mr. Spurgeon, Maryport; Dr. Brooks, Manchester; Mr. Shattock, Richmond, Yorks; H. T. M., London; C. H. O. B., London; Secretary, South Devon and East Cornwall Hospital; Practitioner, London; K., London; Lady Superintendtnt, Bournemouth; Medicus, Maidstone; Matron, The Hospital, Weston-super-Mare; Carolus, London; Secretary, Patricroft; Physician, London; W. E. G., London; S. W., York; N. T., Blackfriars-road; C. H. W. B., London; J. W. W., Wakefield; A. Z., London; Sigma, London; Achilles, London.

NEWSPAPERS.—*New York Times, Bradford Observer, Ayr Advertiser, Newcastle Daily Chronicle, Yorkshire Post, New York Daily Tribune, Eastern Evening News, Liverpool Daily Post, Bristol Mercury, Scottish Leader, Leeds Mercury, South Wales Daily News, Scotsman, Sheffield Daily Telegraph, National Press (Dublin), Le Temps (Paris), Freeman's Journal, Catholic Times, Insurance Record, Local Government Chronicle, Surrey Advertiser, City Press, Weekly Free Press and Aberdeen Herald, Mining Journal, Reading Mercury, Citizen, Hertfordshire Mercury, Windsor and Eton Express, Builder, Sunday Times, Broad Arrow, Chemist and Druggist, West Middlesex Standard, Spectator, Saturday Review, Pharmaceutical Journal, Law Journal, North London Guardian, Windsor and Eton Gazette, Metropolitan, West Middlesex Advertiser, Hereford Times, Hertfordshire Standard, Times of India, Pearson's Weekly, Northern Daily Telegraph, Dartmouth Chronicle, Pioneer (India), Eastbourne Gazette, Wrexham Advertiser, Architect, Liverpool Mercury, &c.*, have been received.

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